DOCTORAL THESIS

What determines women's autonomy : theory and evidence

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Award date:
2014

What Determines Women's Autonomy:

Theory and Evidence

By

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Thesis submitted in partial fulfilment of the requirements of the degree of Doctor of Philosophy (with coursework component), Discipline of Economics.

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January 2014

ABSTRACT

This thesis introduces multilevel measures of women's autonomy and examines its determinants within a developing country. Using a simple theoretical model, it is demonstrated that the earned income of women and the household composition (notwithstanding the family size) are the fundamental determinants of women's autonomy at the household level. Therefore, the above two factors are considered as the valid threat options of a woman when determining her decision-making power relative to her husband in the household. This thesis also incorporates various co-determinants of women's autonomy derived from sub-branches of sociology, demography, anthropology and household bargaining theory, which include household characteristics, individual embedded characteristics, geographic locations and cultural constraints commonly faced by women within this society.

A woman's autonomy is defined here as the relative decision-making power of a woman to her husband in household decision-making settings. Autonomy is measured as a multilevel concept formally known as, '*no autonomy'*, '*partial autonomy'* and '*strong autonomy',* based on direct measures derived from the country-wide household level survey data examined here. This multilevel autonomy covers almost all aspects of the decision-making process in the typical household. Explicitly, autonomy is classified into two main dimensions: '*Economic Decision-Making*' and '*Family Planning Decision-Making*' in the household. Further, the above two dimensions include various sub-dimensions constituting the aggregate indices of economic and family planning decision-making autonomy.

For empirical verifications of the theoretical propositions, we utilise data from '*Pakistan Social and Living Standards Measurement'* survey (PSLM) 2005-06 conducted by the Pakistan Bureau of Statistics, which is comprised of a series of cross-sectional surveys over a period of five years. This survey includes interviews with 15,453 households corresponding to almost all of the socio-economic issues based on a two-stage stratified sampling design. This survey aims to provide detailed outcome indicators on education, health, population, welfare, water and sanitation and income and expenditure. Therefore, this data is claimed to provide a set of representative population-based estimates of social indicators and their progress under the Poverty Reduction Strategy Paper (PRSP).

Notwithstanding the conventional estimation techniques, this thesis cautiously devises an appropriate strategy of estimation for empirical analysis. For instance, the use of *Ordinary Least Squares* (OLS) and *Cumulative Approach Probability Models* (Logit/multi-category Logit models) can be frequently observed on similar research topics where the variable of interest is categorical in nature. However when a dependent variable is categorical, the OLS method can no longer produce the best linear unbiased estimator (BLUE); that is, OLS is biased and

inefficient. Similarly, *Cumulative Approach Probability Models* may also give biased and misleading results if the proportionality assumption is relaxed and adjacent categories are ignored in the categorical dependent variable. This study firstly utilises the most common technique, the Cumulative Approach (proportional odds model) probability models and evaluates the results by testing the proportionality assumption. Finally, the Adjacent Approach probability model is adopted by relaxing the proportionality assumption within the multilevel context of women's autonomy.

Finally, this thesis presents detailed analysis from both an overall perspective and with an urban and rural divide. Consistent with the theoretical model, overall results show those women earning an independent income display higher levels of economic decision-making autonomy compared to women without an independently earned income. Household size comprised of elderly persons including the relatives of a husband, appears to substantially decrease the economic decision-making autonomy of women at the household level. Conversely, another component of household size which looks at the increasing numbers of children has the effect of increasing women's autonomy at the household level. Further, the gender of children does not appear significant on either dimension of women's autonomy. The specific family formulation (nuclear versus extended family) significantly affects the decision-making power of corresponding women at the household level. These results are consistent with all sub-dimensions of economic decision-making autonomy at the household level except for medical treatment and recreation and travel related decision-making aspects. In the context of family planning however, these results appear to be only partially significant.

With regards to a woman's individual characteristics, the overall evidence confirms that any level of education, as compared with no education, increases women's autonomy but is insignificant in terms of monotonically increasing the level of autonomy. Similarly, the age of a woman is seen as an increasing indicator of autonomy. Interestingly, the education level of a husband does not correspond to increasing autonomy for a woman, however, her husband's income level appears to be significant. Similarly, the family's overall socioeconomic status is also positively and significantly associated with increasing autonomy. Further, results show that regions (urban/rural divide) have a modifying effect in the overall evidence on women's autonomy. Furthermore, state/provincial fixed effects were also observed to be significant to varying degrees of autonomy. Women from the province of Punjab record the highest autonomy in economic decision-making spheres, however women from the NWFP (North West Frontier Province) reflect the highest degree of autonomy in family planning decision-making at the household level. The conclusions we reached from the empirical analysis reveal that social and cultural norms of society also play an important role in shaping women's decision-making power within the household.

STATEMENT OF ORIGINALITY

This thesis is submitted to Bond University in fulfilment of the requirements of the degree of Doctor of Philosophy. This thesis represents my own original work towards this research degree and contains no material which has been previously submitted for a degree or diploma at this University or any other institution, except where due acknowledgement is made.

Signature:----------

ACKNOWLEDGEMENTS

One of the joys of completion is to look over the past journey and remember all the friends and family who have helped and supported me along this long but fulfilling experience.

I would like to express my heartfelt gratitude to Professor Ahmed M. Khalid, Professor Arthur Goldsmith (Washington and Lee University, USA) and Associate Professor Gulasekaran Rajaguru who are not only my supervisors but my dear friends. They always provided me with encouraging and constructive feedback. I greatly appreciate their inspirational and supportive role, the research values and the dreams that they have given me so that I can in turn, pass them on to others. They have been very patient, kind and generous in providing me with time and the necessary guidance from the beginning till the end of this journey.

I would like to thank Professor Rodney Falvey, Dr. Shrawan Luckraz, Dr. Syed Zahid Ali (LUMS) and Dr. Hayat Khan (Latrobe University) for their contributions and intellectual discussions which helped me to enhance my understanding of the research issue. I would also like to thank the organiser of the 'Brown Bag' seminars, Dr. Shrawan Luckraz, who motivated me to share my research experience on different occasions where I benefitted from discussions and debates with my colleagues, particularly, Dr. Neil Campbell, Frank Barbera, Melissa Bond, Robert Wrathall, Professor Noel Gaston (Productivity Commission & Monash University) and Professor Mark Spence. I have been surrounded by wonderful colleagues, and a rich and fertile environment to study and explore new ideas. I would also like to thank Tonya Roberts for her excellent editorial assistance with this thesis.

I am grateful to the Business School of Bond University for taking care of me in all respects and providing me with an excellent research environment throughout the study program. I would like to thank Professor Chris Del Mar, Professor Alan Finch, Professor Mark Hirst, Professor Craig Langston and Professor Keitha Dunstan in recognising and appreciating my academic and research capabilities on various occasions. I am also thankful to Janet Price and Doreen Taylor who always assisted me by efficiently responding to my PhD program-related technical inquires. My best times and wonderful memories of campus life come from working throughout the night. In particular, watching trees dancing in the peacefully heavy rains, spotting wandering hares, hearing echoes of cuckoos and red-wattled lapwings (some other beautiful birds which I don't know the names of) and locating the Southern Cross on brightly lit nights. Furthermore, I also remember the gentle gestures of security guards and cleaners who, when coming in very late at night, would stop by for a minute and ask after my well-being.

I would like to mention that being elected as the University-wide President of the HDR students' society gave me the wonderful experience of mixing with students from different parts of the world. Within the role I established a reader's forum for all PhD students to present their research ideas for debate, discussion and comment. I learnt a great deal from listening to fellow students and gave voice to their opinions at the regular research committee meetings. I appreciate the research committee who always valued students and provided the necessary help required in their research studies. As a result, all PhD students are encouraged and provided with financial support to travel for their research presentations at worldwide forums.

I am grateful to my great teacher Professor Eatzaz Ahmed (Quaid-i-Azam University), from whom I learnt state of the art research skills which helped immensely in facing research challenges throughout this PhD program. From the State Bank of Pakistan (central bank), I am grateful to my wonderful colleagues and friends Dr. Riaz Riazuddin (chief economic advisor), Dr. Muhammad Ali Chaudhary, Dr. Omar Farooq Saqib, Dr. Saeed Ahmed and Dr. Mian Farooq Haq, who persistently motivated and encouraged me to go for the higher degree research program at Bond University.

I dedicate this thesis to all women who have achieved autonomy through their struggle in a male dominated world, and particularly mothers who contribute to the welfare of society by taking care of the well-being of a new generation. I say so because of my dearest mother, Razia Baigum who left no stone unturned to see me become a successful man in all aspects of life. I also commend the great role my father, Allah Yar Khan played in providing me with the freedom of choice since early childhood. I am greatly obliged to my siblings, in particular my big brother, Habib Ullah Khan for providing me with an environment conducive to learning, including financial support throughout my time away for educational purposes. I deeply appreciate the role of my uncle, Emeritus Professor Gilani Kamran, from whom I learnt excellent values derived from philosophical discussions with him on various subjects, while living with him during my early academic career.

Last, but not least, I am grateful to my wife, Nagina who stood firm and contributed her vision in shaping this thesis on women's autonomy, a contribution which I thoroughly enjoyed and mostly agreed with. In addition, I must acknowledge her role in taking great care of our son, Ayan, and all household-related responsibilities, to allow me sufficient time and space to successfully complete my research project.

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CHAPTER 1

INTRODUCTION

1.1. Motivation

The concept of women's autonomy, apart from its inherently essential nature, has become the subject of research discussions among policymakers, academics, non-governmental organisations and researchers. Over the recent past, it has been observed that increased levels of women's autonomy not only help to reduce fertility rates, but they also lead to an improvement in the health and educational well-being of children, through the distribution of resources.[1] Furthermore, women's autonomy is also positively linked with socio-economic development through higher participation in the labour market.

Besides policy goals, there has been debate in the socio-economic development literature on how to characterise, enumerate and increase women's autonomy.[2] Most of the debate centres on women's participation in economic activities, control over financial resources, social norms and practices as the determinants of women's autonomy in the household. Participation in economic activities and control over financial resources has increasingly become a focal point among many research studies as a dominant factor of empowering women (see footnotes 1 and 2). More than a century ago, Engels (1884) argued that increased women's participation in the labour market is the major source of emancipation from the servitude of the patriarchal family. More recently, Anderson and Eswaran (2009) amongst others, provide convincing evidence of how a female's valid threat options in terms of having an earned income

[1] There is a great degree of consensus that increased female autonomy directly adds to the welfare of children and the household overall. For instance, Mukherjee (2013), and Grabowski and Self (2013), find that in India, women's autonomy increases children's wellbeing although there remains a gender bias towards boys and against girls. In a different context, Dyson and Moore (1983), Caldwell and Caldwell (1987), Mason (1996), Hogan et al. (1999) and Eswaran (2002), demonstrate the significant impact of women's autonomy in reducing fertility rates and increasing children's welfare. Amongst several others, Strauss et al. (2000) and Thomas (1990), conclude that in contrast to men, women allocate a greater proportion of their time and their earned or unearned income towards the family's well-being. Similarly, but within a different context, Lancaster et al. (2006) and Gitter and Barham (2008), show there is a non-monotonic association between women's autonomy and children's well-being.

[2] As also stated in Malhotra and Schuler (2005), literature has evolved numerous terminologies referring to female autonomy, for instance, Dyson and Moore (1983), Basu and Basu (1991) and Jeejebhoy and Sathar (2001), measure 'women's autonomy', Gage (1995) and Tzannatos (1999) measure 'agency', and 'status, Quisumbing et al. (2001) measure 'women's land rights', Mason (1996) 'domestic economic power, Beegle et al. (2001), Hoddinott and Haddad (1995), Quisumbing and de la Briere (2000) discuss 'bargaining power', Agarwal (1997), Beegle et al. (1998) and Pulerwitz et al. (2000) use 'power', Malhotra et al. (1995) refers to 'patriarchy', and the World Bank (2001a; 2000b) refers to 'gender equality' or 'gender discrimination'. Sen (1993) defines empowerment as 'altering relations of power … which constrain women's options and autonomy and adversely affect health and well-being.' Batliwala's (1994) definition is 'how much influence people have over external actions that matter to their welfare.' Keller and Mbwewe (1991) also cited in Rowlands (1995) describe it as 'a process whereby women become able to organize themselves to increase their own self-reliance, to assert their independent right to make choices and to control resources which will assist in challenging and eliminating their own subordination.'

increases her levels of autonomy in the household. More recently, Eswaran, Ramaswami and Wadhwa (2013) consider family status and caste as the most important factors in determining women's autonomy in India. In a slightly different context however, Chen (2013) observes that the immigration effect of a male spouse, subject to the negative shock, appears irrelevant to a female spouse's bargaining power in the household. Apart from this anecdotal evidence, many case studies including those of the World Bank (1995), Acharya and Bennet (1982) based on Nepal, Finalay (1989) based on the Dominican Republic, Safa (1992) based on the Caribbean, Ecevit (1991) based on Turkey, Anderson and Eswaran (2009) in Bangladesh, Rahman and Rao (2004) in India, Ashraf and Ashraf (1993), Kozel and Alderman (1990), Azid et al. (2001) and a few other studies based on Pakistan, argue that women's employment outside of the household increases her decision-making power in the household. DFID (2007) finds that economically empowered women tend to have greater bargaining power over spending decisions regarding children's health and educational wellbeing. Similarly, Blumberg and Coleman (1989), Rahman and Rao (2004) and Agarwal (1997), emphasise that women's control over resources such as land and credit in the developing countries enhances their power in the household. Further, Boserup (1970), Dyson and Moore (1983), and Anderson and Eswaran (2009), point out that land-holding or participation in small enterprises helps to increase women's autonomy. Furthermore, Folbre (1984) and Kabeer (1999) prove there is a positive association between a woman's premarital asset holdings and her post-marriage empowerment. Amongst others, Hashmi et al. (1996) concludes that access to credit and having independent savings, along with additional factors of social norms, cultural and religious factors, are the key determinants of female autonomy within the household decision-making process.

The evidence arising from these studies can be distinguished into economic and non-economic literature, the latter includes studies within the areas of sociology, demography and anthropology, and is dependent on the identified channels which increase women's household empowerment. Blood and Wolf (1960) developed a theory commonly known as resource control theory in the context of sociological applications to explain the connections between access to resources and women's empowerment. More recently, authors such as Blumberg and Coleman (1989), Kabeer (1997), Malhotra and Mather (1997) and Mizan (1994), to name a few, use a slightly modified theory of resource control to identify similar channels (access to resources) in determining women's autonomy. On the other hand, the economic perspective of the household theory of decision-making which is based on standard methods of microeconomics, introduces a variety of bargaining models to identify women's autonomy in the household. Manser and Brown (1980) and McElroy and Horney (1981) can be considered the pioneering economists with the greatest contribution to identifying female bargaining power in the household. The bargaining models relate to women's autonomy and their threat options in the household decision-making processes. More specifically, increasing threat options allows a

woman to retain her well-being in the event of a marital breakdown, either within cooperative or non-cooperative situations. Further, the threat options may be based on a variety of distribution factors associated with an individual's characteristics and resources, which all add to their bargaining power (McElroy,1990; Sen, 1990; Kabeer, 1994).

Interestingly, some researchers on this subject including Agarwal (1997), Kabeer (1997), Malhotra and Mather (1997) and Mizan (1994), and more recently Eswaran and Malhotra (2011), all raise a common question on the theoretically established link between access to resources, threat options and women's autonomy. In other words, they pose a challenge to the applications of sociology resource control theory and the bargaining theory of threat options, by identifying the intervening factors of context specific and cultural norms as important determinants of women's autonomy in the household. Consequently, the above resource control theory was criticised on several fronts. For example, it does not appear to support the contextual assessment of women's empowerment regarding their access to resources. Jejeebhoy and Sather (2001), Kabeer (1997), Malhotra and Mather (1997) and Mizan (1994) fail to witness any improvement in women's status with an increased access to resources. Similarly, Agarwal (1997) argues that social factors hinder the application of bargaining theory where threat options are used, leading towards their autonomy. Further, the bargaining models largely ignore the implications of those social norms in the analytical cooperative and non-cooperative models of decision-making. In fact, the strong cultural traits prevalent in the developing countries may directly or indirectly influence women's decision-making power in the household.

Another motivation for this research is due to constraints we observed on women's autonomy in Pakistan. Historically, Pakistani society within a social and cultural context, is patriarchal and highly gender stratified; men and women perform separate roles with the artificial gender division of labour defining the home as the women's sphere, thus confining them to the specific responsibilities and reproductive roles within that domain. Men, on the other hand, have been assigned the role of breadwinner outside the home, in the outside world, a world from which women in general are banished.[3] Consistent with these observations, a strong commitment to family life and family values are the key features of the social organisation of Pakistani society. Essentially, the family formation is patrilineal and marriage considered the starting point with marriages often arranged within a kin-group. After marriage, a young woman supposedly comes under the control of her mother-in-law and husband. She has little participation in domestic decision-making and a limited degree of freedom to move or travel independently. Reproduction of the patrilineal lineage, particularly the number of sons, is

[3] As observed by Bari (2000) and Khan (1999), amongst others.

probably the most important means available to a woman in securing a position within her husband's home.[4]

Traditionally, one of the most obvious manifestations of gender stratification in Pakistan is the institution of 'purdha' (a covering of the head, face or whole body), which differentiates the role and space of women from men. Many observers have pointed out different reasons and implications of 'purdha' with regard to women's liberty in Pakistan.[5] However, beyond these characteristics of gender differentiation, studies have identified further key factors responsible to restricting women inside the household. These factors include forms of social exclusion such as socioeconomic status, the urban/rural divide and ethnicity.[6] Furthermore, most traditional customs rely on the authority of the male and his power over females, linked to patriarchal structures which remain stronger in tribal and rural more than urban settings. Urban middle-class women to some extent have greater access to education and employment, however, rural women are far more restricted with fewer educational and working opportunities available to them. This is further evident when we look at the socio-economic development within different states of Pakistan. For example, the state of Punjab is considered to have a relatively better outlook in terms of development and opportunities for women, compared with the other three major states of Pakistan.

The current study aims to fill in the gaps within the existing literature on the topic of women's autonomy in various aspects, from measurement, to the methods of empirical analysis. More specifically, this thesis contributes to the existing literature along the following lines: ***a)*** we measure autonomy on a multilevel scale referred to as '*no autonomy*', '*partial autonomy*' and '*strong autonomy*', against direct measures of women's autonomy within the context of economic and family planning related decision-making in households; ***b)*** we identify household composition as the fundamental determinant of women's autonomy, an aspect which has been ignored in the existing literature (household composition is explained in terms of family formation and the size of the household which is further disaggregated into two categories, the inclusion of elderly persons and relatives of the husband living in the same household, and the number of children); ***c)*** we evaluate the role of different varieties of determinants classified as threat options and the common determinants of women's autonomy on aggregated economic and family planning measures of autonomy, as well as disaggregated analysis including various sub-dimensions of autonomy in the household; ***d)*** we utilise a unique data set which is based on stratified sampling, including urban and rural regions, and is therefore representative of the whole country population; ***e)*** we use modified multinomial logit model settings for the empirical

[4] As also pointed out in Jejeebhoy and Sathar (2001), Sathar and Kazi (2000), and Winkvist and Akhtar (2000).
[5] As mentioned in Hafeez (1998), Khan (1999), Cain et al. (1979), Sathar and Kazi (1997) and Donnan (1997).
[6] As pointed out in Donnan (1997) and Bari (2000).

analysis instead of commonly used ordered logit models for two reasons, firstly, women's autonomy is measured on a multilevel scale and we intend to investigate the sensitivity of determinants among '*no autonomy*', '*partial autonomy*' and '*strong autonomy*', secondly, we test the necessary assumption of proportionality required in simple ordered logit model settings, however, on violation, the above technique remains no more valid and so we move on to the multinomial logit model, and lastly, ***f)*** Pakistan is used as the case study, a country which has previously lacked any type of comprehensive research on the issue of women's autonomy.

The rest of the Chapter outlines the concept of autonomy and alternative terminologies used to define women's autonomy, the scope of the research, and the objectives and scheme of this thesis.

1.2. The Concept of Autonomy and Alternative Terminologies

Women's empowerment over time has been defined in several different ways depending on the specific context and research interest of various researchers. Therefore, we may trace this concept in various discussions and studies originating from specific global policymaking institutions, forums and organisations.[7] Similarly, feminists[8] also discuss and promote the empowerment of individuals and women's organisations but in context specific aspects.

Further, the concept of empowerment exists in social inclusion philosophy as a mechanism of civil society growth and development.[9] Bennett (2002) observes that empowerment and social inclusion are alike but separate in conceptual aspects. As stated in Malhotra and Schuler (2005), Bennett defines empowerment as, '*the enhancement of assets and capabilities of diverse individuals and groups to engage, influence and hold accountable the institutions which affect them*', and social inclusion as, '*the removal of institutional barriers and the enhancement of incentives to increase the access of diverse individuals and groups to assets and development opportunities.*' Similarly, Narayan (2002) and Ravallion and Chen (2003) argue that the process of systemic change is essential to sustain empowerment over time. Thus the process of social inclusion corresponding to development and economic growth involves institutional transformation and 'rules of the game' modifications over time. The literature on social inclusion theories, however, does not explicitly include the concept of women's empowerment.

We find further aspects centering on the main concept of women's empowerment in various relevant contexts. For instance, Sen (1993) defines empowerment as '*altering relations of power … which constrain women's options and autonomy and adversely affect health and*

[7] In particular, these are the United Nations Division for the Advancement of Women (UNDAW), ESIM (2001), UNICEF (1999), Department for International Development (DFID, 2000), Everett (1991) and RESULTS (1997).
[8] For instance, see Sen and Grown (1987), Jahan (1995) and Kumar (1993).
[9] See Friedmann (1993) and Chambers (1997).

well-being'. Batliwala's (1994) definition describes '*how much influence people have over external actions that matter to their welfare.'* Keller and Mbwewe (1991) also cited in (Rowlands 1995) describe it as '*a process whereby women become able to organize themselves to increase their own self-reliance, to assert their independent right to make choices and to control resources which will assist in challenging and eliminating their own subordination'*.

Another relevant concept derived from the human rights and feminist perspectives is human agency connected with the formulation of choices. This implies the choices made are based on self-interest.[10] Also cited in Malhotra et al. (2002), Kabeer (2001) gives an all-encompassing definition of women's empowerment which captures all the aforementioned contexts: *'The expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them'*.

However, from the practitioner's perspective, for example Narayan (2002) in the World Bank's *Sourcebook on Empowerment and Poverty Reduction*, it is pointed out that women's empowerment encompasses some unique features differentiating them from other disadvantaged or socially neglected groups. Narayan further states that: ***i)*** women as a group need to be differentiated from other subsets of society, eg. the poor and ethnic minorities; ***ii)*** they also differ from other subsets in terms of their household and interfamilial relationships, and ***iii)*** several contemporary studies argue the need for systemic improvements in institutions and what are, essentially, patriarchal structures.[11]

Awareness of these unique features has led to several developmental organisation agencies, activists and individual researchers to focus on conceptualising gender inequality and women's empowerment issues. As a result, a diverse body of research has emerged on contextualising, measuring and relating women's empowerment to other variables of interest. Furthermore, this research is emerging from the interstices of various disciplines including demography, sociology, economics, anthropology and public health studies.

We therefore find several terminologies are used to conceptualise and gauge women's empowerment in the household and society. It may be relevant to note that all those terminologies are context specific and dependent on the research interest of the authors. For example, as cited in Malhotra et al. (2002), women's empowerment has been given a variety of different names, including women's autonomy, agency, status, land rights, domestic economic power, bargaining power, patriarchy, gender equality and gender discrimination, within various studies.[12] Correspondingly, we have found further common key terms all referring to women's empowerment or autonomy, for example, option, choice, control and power.

[10] As discussed in Sen (1999), Sen (1993), Kabeer (2001), Rowlands (1995), Nussbaum (2001) and Mosedale (2005).
[11] See Kabeer (2001), Bisnath and Elson (2000), Sen and Grown (1988) and Batliwala (1994).
[12] Dyson and Moore (1983), Basu and Basu (1991), Jeejebhoy and Sathar (2001), Gage (1995), Tzannatos (1999), Quisumbing et al. (2001), Mason (1996), Beegle et al. (2001), Hoddinott and Haddad (1995),

Within the literature, we find a great degree of consensus regarding the definition of the concept of empowerment. The common underlying definition of these terminologies refers to the ability of women to make decisions for themselves and/or for the well-being of their families. Within this thesis, we follow guidelines based on the standard household decision-making theory which defines autonomy as a woman's bargaining power relative to her husband's in the household.

1.3. Research Scope

In addition to developing a theoretical model to highlight women's threat options, this thesis also presents empirical analysis to verify the validity of some unique propositions. The focus of this thesis remains identification of the relevant determinants of women's autonomy using extensive micro-level data from Pakistan. Most of the existing research on women's autonomy concentrates on India and Bangladesh amongst few other developing countries. However, no comprehensive research on this important topic has been conducted using data from Pakistan. There are some minor studies which directly or indirectly focus on the context of Pakistan, but they have limited scope and methodological constraints.

This thesis aims to bridge the gap in the literature by offering a comprehensive analysis on the multi-dimensional concept of women's autonomy through the use of a sufficiently large data set which is based on household information representing the entire population of the country. This data allows us to measure autonomy based on the direct responses of participant women from the urban and the rural regions of all four states of Pakistan.

1.4. Research Objectives

The main objective of this thesis is to investigate the relative importance of different determinants of women's autonomy. Given the limitations of existing research on the subject we intend to introduce an encompassing framework of analysis embedded with cultural factors usually ignored in the past. Correspondingly, the research agenda of the thesis has two main aspects with reference to the characterisation of the determinants of women's autonomy. These are:

a) Identification of the relevant threat options as indicated in the bargaining models based on standard methods of household decision-making theory. As predicted within the theory, the threat options may allow a woman to exercise her bargaining power in various aspects of decision-making process in the household. Therefore more bargaining power leads to greater autonomy in the household.

Quisumbing and de la Briere (2000), Agarwal (1997), Pulerwitz et al. (2000), Malhotra et al. (1995), and World Bank (2001a; 2001b).

b) We ask, given the threat options, what else could be more relevant in association with women's autonomy in the household? This thesis identifies further relevant determinants, including cultural traits captured through the existing family formation systems, socio-economic status of the family and geographic fixed effects.

In the light of these two aspects, this thesis specifically aims to contribute to the existing stream of literature on women's autonomy, with the following sub-objectives:

i) Present a comprehensive literature review by identifying commonalities, controversies and gaps in the existing literature on the subject of women's autonomy. Further, classification of the literature based on the economic theory of household bargaining models and non-economic literature including sociology, anthropology and demography studies.

ii) Construction of a framework of analysis consistent with the local socio-economic settings based on separate sphere characteristics of household composition.

iii) Characterising the multidimensional concept of women's autonomy as aggregated and disaggregated concepts based on direct measures using extensive household level stratified data, representative of Pakistan's entire population.

iv) Review of the existing methods of estimations and presenting the modified version of multinomial logit models consistent with the requirement of empirical analysis.

v) Finally, an empirical assessment of the results of women's autonomy from the overall, urban and rural stratifications.

1.5. Organisation of Thesis

This thesis is organised into several Chapters reflecting the importance and relevance of different concepts throughout the fulfilment of the scope of this research study. The next Chapter presents a review of the literature by classifying existing studies and highlighting the gaps in research on women's autonomy. Chapter 3 illustrates a theoretical framework of analysis as motivation for the empirical analysis adopted in this thesis. Chapter 3 further provides analysis based on simple simulations to determine the validity of threat options suggested in the framework of analysis. Relevant empirical conjectures are also specified. Chapter 4 discusses data sources, definitions and construction of variables to be used in the relevant empirical analysis. Chapter 5 presents descriptive evidence on the multidimensional, multilevel concept of women's autonomy in association with identified

determinants. Methods of estimation are discussed in Chapter 6. Chapter 7 presents results and a discussion on the aggregated economic decision-making aspects of women's autonomy from an overall, urban and rural perspective. Correspondingly, Chapter 8 illustrates findings of the disaggregated analysis of economic decision-making dimensions of women's autonomy. Chapter 9 discusses results of the aggregated family decision-making context of women's autonomy from the overall sample, as well as from the urban and rural regions. Similarly, Chapter 10 presents the disaggregated results of family planning decision-making aspects of women's autonomy. Lastly, Chapter 11 summarises the overall findings of this thesis, identifies its limitations and outlines the scope for further research on this subject.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

This Chapter aims to provide a review of the existing research on the topic of women's autonomy. Given its nature and scope, this issue has been discussed and analysed from a multidisciplinary perspective. Broadly, discussion on women's autonomy can be classified into two main streams of literature, namely, 'Family Economics'[1] and other social sciences including Anthropology, Sociology and Demography studies.

The household theory of economics provides a comprehensive analysis of family economics including intra-household allocations of resources, altruism in the family, household production and investment, investment in and financial transfers to children, matching in the marriage market, divorce and child support, non-altruistic family transfers, household formations and social interactions. In particular, the household decision-making theory provides a detailed analysis of the interactions between a husband and wife within various aspects of decision-making processes in the household. Further, this theory recognises women's autonomy through her threat utility relative to her male partner in the context of cooperative and non-cooperative interactions in decision-making processes in the household. Both Eswaran and Malhotra (2011), and Anderson and Eswaran (2009) show convincing evidence of women's valid threat utility in asserting their bargaining power relative to their male partner's in the household. More recently, Eswaran, Ramaswami and Wadhwa (2013) determined family status and caste as the most important factors in determining women's autonomy in the household in India. However, in the context of a cooperative model context, Chen (2013) observes that the immigration effect of a male spouse subject to the negative shock appears irrelevant to women's bargaining power in the household. Similarly, other disciplines including anthropology, sociology and demography highlight the concept of women's autonomy within the context of gender inequality. Anthropology studies generally link development with improving levels of women's autonomy in society. Further, the sociology theory of resource control emphasises women's ownership rights as related to their autonomy within the household and society in

[1] This concept may be traced back from Becker, Duesenberry, and Okun (1960) and Becker (1960). More recently, the term 'family economics' was coined by John F. Ermisch (2003). This branch of economics discusses family issues through the lens of standard analytical methods of microeconomics theory.

general. Demography studies identify the key relationship between women's autonomy and the demographic processes in society.

Further studies measure women's autonomy and present empirical evidence of its determinants within various contexts. The following discussion looks at the concept of autonomy from the household decision-making theory and discusses the empirical evidence of its determinants, which have appeared in various studies grouped within other social science fields. Finally, we comment on the main shortcomings observed within the existing literature, of which we attempt to address within this thesis.

2.2. Economic Theory of the Household and Women's Autonomy

The economic theory of the household specifically regarding women's autonomy can be classified into two models, unitary and non-unitary.

2.2.1. Unitary Household Models

The economic theory, specifically the microeconomics theory of the household, traditionally operated using unitary models of the household. Unitary models of the household assume a single decision-making agent with a single budget constraint corresponding to a single utility function and household member's consumption is considered as an argument. Therefore, the unitary model treats the household as an aggregate in the context of standard demand theory with straightforward empirical implications. However, the unitary household models came under heavy attack on theoretical and empirical dimensions mainly because of aggregation issues of individual preferences. Large numbers of studies afterwards failed to find any support from the data on unitary models. Further, the unitary household models failed to address the intra-household inequality and household formation-related issues. Therefore, since the 1980s, a wide variety of non-unitary models have emerged in response to the above concerns.

As appeared in Samuelson (1956), households maximize the single utility function subject to the pooled budget constraint and the baseline unitary model, which can be shown as:

$$\left.\begin{aligned} &\max_{c^h, c^w} U(c^h, c^w) \\ &s.t. p^h c^h + p^w c^w = y^h + y^w \equiv y \end{aligned}\right\} \qquad (2.1$$

According to this model, husband (*h*) and wife (*w*) each has an individual utility function that depends on their own consumption (*c*) of private goods with prices (*p*). This further shows that both individuals maximise the social welfare function of their own utilities subject to the single constraint resulting from pooling their incomes, hence the household income (*y*). Correspondingly the model solves the husband and wife demand functions f^h and f^w as:

$$c^{h,w} = f^{h,w}(p^{h,w}, y) \qquad (2.2$$

The above demand functions of husband and wife clearly depend on the prices of private goods and the aggregate income of the household. Therefore, a change in income level has identical implications for each of the individual's demand functions. On the other hand, if income and any change in the sources of income remain constant, there would be no effect on any of the individual's level of demand or consumption. It also implies that any change in one's sources of income has a similar effect on respective demand functions. Therefore, the assumption that pooling household income does not differentiate between partial effects of changes to an individual's sources of income hence may be sharing equal amounts of utility from consumption in the household. This model gives the impression that a wife has an equal level of autonomy relative to her husband in the household.

2.2.2. Non-Unitary Household Models

The non-unitary models can be classified into two categories known as cooperative models and non-cooperative models. The cooperative models lead to a Pareto efficient outcome which is not assured in the non-cooperative models.

2.2.2.1. Cooperative Models

The cooperative models can be further classified as either Nash bargaining models, or collective models.

Nash bargaining models: As appeared in Manser and Brown (1980) and McElroy and Horney (1981), the Nash bargaining models were the first of the non-unitary household models. They recognise individual utility functions through the concept of threat points (T) which are external to the household (for example, divorce). Therefore the threat points correspond to the maximal utility of a husband and wife. Further, the threat options are a function of some vector distributional factors (Z). A typical household maximisation problem, subject to the pooled income constraint can be shown as:

$$\left.\begin{aligned} &\max_{c^h, c^w} \left[U^h(c^h) - T^h(z)\right]\left[U^w(c^w) - T^w(z)\right] \\ &s.t. p^h c^h + p^w c^w = y^h + y^w \equiv y \end{aligned}\right\} \qquad (2.3$$

As shown in this model, *z* includes both husband and wife incomes, therefore income pooling is no longer applicable. This is precisely where this set-up differs from the unitary household models.

Collective Models: Chiappori (1988; 1992) demonstrates collective models as the generalised version of the Nash bargaining models. According to these models, a household maximises the weighted sum of a husband and wife utilities function, subject to the pooled budget constraint. The weighting depends on the vector distribution factors as mentioned in the above Nash bargaining settings. For example, a typical collective model can be shown as:

$$\left.\begin{aligned} &\max_{c^h, c^w} U^h(c^h) + \mu(z) U^w(c^w) \\ &s.t. p^h c^h + p^h c^h = y^h + y^w \equiv y \end{aligned}\right\} \qquad (2.4$$

As depicted, μ is the relative weight of the wife's utility function and captures her bargaining power relative to her husband. Similar to the Nash bargaining models, the income pooling may not necessarily apply and demand may depend on distribution factors which includes individual incomes. However, the model implies that for any two distributional factors the following equality holds:

$$\frac{\partial c^h / \partial z_1}{\partial c^h / \partial z_2} = \frac{\partial c^w / \partial z_1}{\partial c^w / \partial z_2} = \frac{\partial \mu / \partial z_1}{\partial \mu / \partial z_2} \qquad (2.5$$

It is relevant to note that the consumption decisions are influenced by the distribution factors, which in turn depend on the relative bargaining power between a husband and wife. This is how women's autonomy may be linked with these models of household decision-making processes in the household.

2.2.2.2. Non-Cooperative Models

Lundberg and Pollak (2008) introduce the possibility of intra-household behaviour subject to the potential phenomena of domestic violence and child abuse in the household, and so relax the assumption of binding and enforceable contracts of cooperative models. Further, Lundberg and Pollak (1993) provide compelling arguments in favour of non-cooperative models by developing the 'separate sphere' model of households in particular. Furthermore, the above study emphasises that the threat point is in fact a non-cooperative equilibrium within the household. In this scenario of formulations, each individual maximises his/her utility in the absence of pooling their incomes. This is obviously a distinguishing feature of the non-

cooperative models compared with the cooperative models discussed earlier. However, Chiappori and Donni (2009) mention that there is no difference between cooperative and non-cooperative model equilibria if the consumption is absolutely private to the individuals in the absence of any externalities. Further, if there is an element of public goods consumption and externalities also prevail, then non-cooperative models will yield Pareto inefficient outcomes. In general, the non-cooperative models may reveal multiple equilibria with some that are Pareto efficient, and some that are not. Further, Lundberg and Pollak (1994) also discusses the non-cooperative models by including cultural factors in which equilibrium is realised as being dependent on the resource control by a husband or wife.

Further, the empirical evidence corresponding to the above taxonomy of household decision-making models can be classified into two main categories. One corresponds to the evidence in the context of unitary models of utility maximisation, subject to the pooled income of a husband and wife. Several empirical studies test whether income pooling exists or whether the demand of individuals depends on external distribution factors. The majority of the literature has rejected the hypothesis of income pooling as a single budget constraint of the household. Among others, Lundberg, Pollak, and Wales (1997) reject the hypothesis of income pooling in the study from the United Kingdom. In that study the authors investigated the impact of a policy change which gave child allowances directly to the mothers instead of the fathers, unlike past practice. The study witnessed a marked increase in the consumption expenditures of women and their children, and hence rejected the hypothesis of pooling. Similarly, Attanasio and Lechene (2002) from rural Mexico observed that a wife's higher income share goes towards household expenditures and children's welfare. This also implies that the hypothesis of income pooling is rejected. Further, Blundell et al. (2007) investigate this hypothesis in the case of married couples without children in the United Kingdom. More recently, Lundberg and Pollak (2008) consider the above empirical findings as the key reason for failed unitary models.

The second category refers to the non-unitary models, including cooperative and non-cooperative models respectively with efficient and inefficient Pareto outcomes. Bobonis (2009) considers two distribution factors including PROGRESA grant effects of a wife's income, and the rainfall shock on joint household income, in association with a consumption basket of several goods. This study tests both dimensions of the Pareto efficiency outcomes and the hypothesis of income pooling. Regarding income pooling, the marginal effects of both of the above distribution factors should be identical. However, Bobonis (2009) observed the opposite effects of distribution factors on consumption expenditures. This further explains that a marginal effect by increasing one unit of grant to women increases expenditures on household services and children's welfare; however, it has the opposite effect in the case of a rain fall shock. This clearly explains the rejection of the income pooling hypothesis, however, it supports the Pareto efficiency condition as specified above in Equation 2.5.

Udry (1996), however, finds evidence against the Pareto efficient outcome in plot-level agriculture from three different provinces of Burkina Faso in West Africa. Akresh (2008) extends Udry's study and investigates the Pareto efficient outcome across time and the provinces of Burkina Faso. Akresh finds that the Pareto outcome varies across time and space. Therefore, two main studies, respectively Bobonis (2009) and Udry (1996) created differences which could be linked with the different settings of the aforementioned studies. These different settings respectively correspond to the production aspect (Udry) and expenditure aspect (Bobonis). Furthermore, Ashraf (2009) finds evidence against Pareto efficient outcomes from outside of the production context, by involving a random experiment from the Philippines. This study identifies a lack of inter-spousal information and communication as the reasons for an inefficient Pareto outcome.

Anderson and Eswaran (2009) find in the case of Bangladesh that the employed status of a woman increases her threat utility and therefore increases her level of bargaining power relative to her husband. In another study, Eswaran and Malhotra (2011) emphasise a family's evolutionary past, firmly convinced that more than just employment status is relevant to an increase in women's household autonomy. More recently, Eswaran, Ramaswami and Wadhwa (2013) find that the cultural factors including family status and caste play a substantial role in determining women's autonomy in the case of India. Grabowski and Self (2013) focus on various measures of women's autonomy and find that increasing autonomy decreases the gender bias and hence increases the health and wellbeing of children. Similarly, Doss (2013) also points out various implications of women's autonomy in association with different aspects from the developing countries.

2.3. Non-Economic Literature on Women's Autonomy

Non-economic literature refers to the large number of sociology, anthropology and demography studies which have introduced ad hoc models to empirically investigate the concept of women's autonomy. These studies have commonly established women's autonomy as an endogenous or intermediary concept in association with other factors, depending on the specific context of each study. We attempt to maintain the natural classification of women's autonomy, depicted as the dependent/intermediary variable, as the framework within which we discuss evidence from the existing studies.

2.3.1. Women's Autonomy as a Dependent Variable

Studies considering women's autonomy as dependent variables focus on searching for the appropriate factors which may determine and explain the process of women's autonomy within different aspects of household decision-making. For instance, Hashmi et al. (1996) finds within Bangladesh, extending microcredit to women leads to an increase of their autonomy in the

household. Further, the above study claims that these empowered women then improve their families' wellbeing. In contrast with this evidence, Goetz and Gupta (1996) find microcredit did not empower women in Bangladesh. This is because loans extended to women are mostly controlled by men, therefore loans remain an ineffective source to increasing women's autonomy in Bangladesh. Similarly, Kabeer (1998) also finds that microcredit did not appear to increase women's autonomy. According to this study, microcredit decreased women's autonomy in general, due specifically to the hard trade-off between different dimensions of women's autonomy. Similarly, Mayoux (2001) observes that women from relatively poor family backgrounds have no access to microcredit loans, hence the facility of microcredit has little association with women's level of autonomy in the household. Further, a large number of studies[2] indicate that working outside of the household for an independent income increases women's autonomy in the household. Another strand of empirical studies[3] observes that the social and financial status of a woman's family influences the level of her household autonomy. However, some of the studies[4] have emphasised the individual characteristics of women, including age and education, as vital determinants of autonomy in the household. In a similar fashion, some studies consider inter-spousal level of education, skill and income level to be substantially associated with the relative power of women's decision-making after marriage.

A study of the literature revealed most of them focused on women's autonomy within a specific context of analysis. The cited studies are country specific, sector specific, time specific and/or specific regarding the dimension of autonomy. Furthermore, all these studies measure autonomy by using indirect measures at the level of the individual. For these reasons, it is inadvisable to make too many comparisons between them, and ultimately, conclusions. Conversely, we observed within these studies a set of common determinants with varying effects on autonomy, and contradictory conclusions regarding the effect of the relationship on determinants with autonomy measures. In addition, the determinants identified in these studies do not precisely account for the household formation aspect which may change the outcomes of corresponding studies dealing with different dimensions of autonomy in the household.

[2] See Acharya and Bennet (1983), Ackerly (1995), Grasmuck and Espinal (2000), Kabeer (1997), Malhotra and Mather (1997), Tzannatos (1999) and Winter (1994).
[3] For example, see Frankenberg and Thomas (2001).
[4] For example, Frankenberg and Thomas (2001), Jejeebhoy (2000) and Kabeer (1997).

Table 2.1: Autonomy as an Outcome of Interest

Authors	Location	Sample and Design	Independent and Intermediary Variables	Indicators of Autonomy as dependent variable	Findings
Acharya and Bennett (1983)	Nepal	478 women and 443 men in 7 villages	Market labour versus unpaid family labour.	Farm management, domestic, and resource allocation decisions.	Positive.
Ackerly (1995)	Bangladesh	826 loans to 613 women	Loan characteristics.	Women's accounting knowledge.	Positive.
Goetz and Gupta (1996)	Bangladesh	253 women and 22 men	Loan characteristics.	Women versus men's managerial control of loan.	Microcredit programs are not necessarily empowering women.
Hashemi et al. (1996)	Bangladesh	1,248 women	Microcredit participation.	Autonomy in household and community spheres (mobility).	Microcredit empowers women.
Schuler et al. (1996)	Bangladesh	1,248 women	Microcredit participation.	Incidences of domestic violence.	Domestic violence is less common in communities where microcredit for women is available.
Kabeer (1997)	Bangladesh	60 women and 30 men	Factory wage work and women's.	A woman's perceived status in the household.	Greater status in the household as a result of factory work, but men ... women factory workers are low status.
Kabeer (1998)	Bangladesh	50 women and 20 men	Women's involvement in loan market.	Perceived changes in women's self-worth, agency, contribution to the household, and confidence in community interactions.	Microcredit has decreased the trade-offs that women have to make between dimensions of their well-being.
Frankenberg and Thomas (2001)	Indonesia	5,168 couples	Relative status of husbands and wives at marriage.	Control over cash, spending, and use of time.	Status influences (positive).
Grasmuck and Espinal (2000)	Dominican Republic	126 men and 75 women	Women versus men's financial contribution to household.	Household expenditure decision-making.	Both gender ideology and reliance of households on individual's income are important to autonomy.
Jejeebhoy (2000)	India	1,842 women	Women's and household characteristics.	Role in economic decision-making.	Some dimensions of autonomy are more closely-related than others.

Continued…

Table 2.1 (…continued): Autonomy as an Outcome of Interest

Authors	Location	Sample and Design	Independent and Intermediary Variables	Indicators of Autonomy as dependent variable	Findings
Malhotra and Mather (1997)	Sri Lanka	577 women.	Women's and husband's characteristics.	Control over money matters and other important household matters.	Work for pay and education increase decision- making.
Mason (1998)	Pakistan, India, Malaysia, Thailand, the Philippines	Women in 26 clusters.	Social context in terms of gender and family systems, and women's and household characteristics.	Household expenditure decision-making.	Social context has indirect and direct effects on women's economic power.
Mayoux (2001)	Cameroon	13 focus groups and in-depth interviews with women in 4 provinces.	Microcredit participation.	Control over income, and development of collective social and economic activities.	Using existing forms of social capital to channel microcredit limits benefits to women, especially the poorest women.
Tzannatos (1999)	Multiple countries and regions	ILO data from 1950s to 1990s.	Economic growth—change over time.	Women's labour market position.	A rapid improvement in women's labour market position.
UNDP Human Development Report (1995;1998)	Worldwide	Synthesised national-level data from a variety of sources.		Gender Autonomy Measure .	The GEM reflects economic and political decision-making.
Winter (1994)	Brazil, Chile, Colombia, Costa Rica, Honduras, Venezuela	Analysed employment and earnings data from a variety of national household surveys in the 1980s.	Employers' policy interventions in women's formal sector work.	Women's labour market position.	Overall, women's labour market position has improved.

Sources: Summarised from relevant studies along the lines of Malhotra et al. (2002).

2.3.2. Women's Autonomy as an Independent or Intermediary Variable

As discussed earlier, women's autonomy has also been considered one of the important determinants of fertility rates and other aspects related to family and children's well-being. More precisely these aspects may include fertility in terms of the use of contraceptives, a child's health and wellbeing, household consumption and well-being, reproductive health and investment in development, as dependent variables.

Regarding the fertility rate variable included in previous studies,[5] Abadian (1996) finds that increasing women's autonomy reduces the fertility rate. In a different context, Schuler and Hashmi (1994), and Schuler et al. (1997) observe a significant impact on women's autonomy, namely, an increase in the use of contraceptives, as a result of the microcredit scheme. Dyson and Moore (1983) find instead that kinship patterns influence women's autonomy and thus the fertility rate. Similarly, Gage (1995) observes that women's individual socio-economic status as well as autonomy is strongly linked to fertility rates. Along similar lines, Govindasamy and Malhotra (1996) find that freedom of mobility and women in dominant positions result in higher contraceptive use. Amongst others, Jejeebhoy (1995) investigates the wider set of data and finds that increasing women's education levels decreases fertility by promoting women's autonomy. Similarly, Kishore (2000a) and Kirtz et al. (2000) also observe increasing autonomy levels leads to decreasing rates of fertility. However, Schular et al. (1995a; 1995b) find microcredit has an insignificant effect on women's autonomy and is therefore irrelevant to the fertility rate as evidenced in Bolivia.

In a different context, Basu and Basu (1991) find that increasing women's autonomy leads to decreasing child mortality rates. Desi and Alva (1998) find similar results but highlight the greater role of maternal education in determining women's autonomy and decreasing child mortality rates. Interestingly, Haddad and Hoddinot (1994) witness that increasing women's income share in the aggregate income of the household produces a better physical outcome for sons (height and weight) but not for daughters. Kishore (1992) observes that female participation in the labour force has a positive impact on female longevity levels. Further, Kishore (1993) finds kinship structure and female labour force participation important in gender differentials of early childhood mortality. In the same vein, Rao (1998) refers to the finding that a woman's autonomy in terms of income, education and increasing number of children reduces the incidence of household violence against her.

Some studies focus on the role of women's autonomy within the context of domestic consumption patterns and the well-being of the household. For instance, Hoddinott and Haddad (1995), Pitt and Khandker[6] (1998) respectively find that women's share of income increases the share of the budget spent on food, and credit to women increases non-land assets held by women, further

[5] For example, see Dyson and Moore (1983), Govindasamy and Malhotra (1996), Jejeebhoy (1995), Malhotra et al. (1995), Mason and Smith (2000), Gage (1995), Kishor (2000a), Kritz et al. (2000), Mason and Smith (2000), Schuler and Hashmi (1994), Schuler et al. (1997) and Schular et al. (1995a; 1995b).

[6] Quisumbing and de La Briere (2000) also find similar results.

improving children's educational well-being. Quisumbing and Maluccio (2000) observe that women's control over resources leads to an increase in expenditures on children's welfare, however, boys remain the preferred gender. In a different context, Thomas (1990; 1997) finds that women spend more on human capital investments, for instance, favouring better nutrition and improving children's health. In another context of women's autonomy, Beegle et al. (2001) and others[7] observe greater chances of getting prenatal and delivery care, subject to improved education levels and social status of women. Regarding women's role in the development process, Chattopadhyay and Duflo (2001) observe that women are more likely to participate if the leader of the council is a woman, and where care is taken that the infrastructure is relevant to the particular needs of rural women.

This section on the review of literature has observed that women's autonomy, directly or indirectly, influences various aspects of well-being in the household and society. In general, we found the majority of literature witnessed a positive association between women's autonomy and children's welfare. Additionally, a large number of studies also found that women's independent income increases their level of autonomy but reduces the fertility rate. It was also observed that increasing women's autonomy can play a vital role in increasing investment and economic development.

[7] See Wolff et al. (2000) and Hindin (2000).

Table 2.2: The Role of Autonomy on Other Outcomes of Interest

Authors	Location	Sample and Design	Indicators of Autonomy (as Independent or Intermediary Variable(s))	Dependent Variable(s)	Findings
			FERTILITY AND CONTRACEPTIVE USE		
Abadian (1996)	54 countries	Variety of UN and World Bank surveys.	Relative autonomy.	Total fertility rate.	Autonomy has a negative impact on fertility.
Dyson and Moore (1983)	India	Indian census data from 1971.	Women's social and economic autonomy.	Fertility.	Kinship patterns influence women's autonomy and fertility levels.
Gage (1995)	Togo	3,360 women from the 1988 Demographic Health Survey.	Women's individual socio-economic status and autonomy.	Contraception use.	Women's autonomy increases contraceptive use.
Govindasamy and Malhotra (1996)	Egypt	7,857 women from the 1988 Egypt Demographic Health Survey.	Freedom of movement, weight of wives opinion in household and control of household budget.	Current contraceptive use.	Freedom of mobility and influence in non-reproduction dimensions result in higher contraceptive use.
Jejeebhoy (1995)	Worldwide	Reviewed multiple studies.	Education, kinship structures and women's autonomy.	Fertility.	Kinship structures affect educational expansion. Education decreases fertility by promoting women's autonomy.
Kishor (2000a)	Egypt	7,123 women from the 1995-6 Egypt Demographic Health Survey.	Women's role in household decision-making.	Contraceptive use.	Decision-making and freedom of movement have different effects on unmet needs.
Kritz et al. (2000)	Nigeria	4,870 women from a 1991 survey of women's status and fertility.	Gender context of community, women's role in household decision-making, individual socioeconomic status.	Desire for children and contraceptive use.	Gender equity by province positively affects reproductive behaviour.
Malhotra et al. (1995)	India	Populations of 358 districts from the 1981 Indian census.	Active discrimination towards women, marriage system, economic value of women.	Total fertility rate.	Each dimension of patriarchy has a relationship to fertility.

continued…

Table 2.2 (…continued): The Role of Autonomy on Other Outcomes of Interest

Authors	Location	Sample and Design	Indicators of Autonomy (as Independent or Intermediary Variable(s))	Dependent Variable(s)	Findings
Mason and Smith (2000)	Pakistan, India, Malaysia, Thailand, Philippines	Surveyed probability samples of women and conjugal couples in 26 clusters of villages or urban neighborhoods.	Women's autonomy in economic and reproductive decision-making (eg. who decides the number of children), mobility. freedom from threat (eg. whether there is domestic violence against women), couple communication (eg. whether couple has discussed family planning).	Desire for children and contraceptive use.	Gender stratification does not influence spouses' agreement about number of children to have but does influence use of contraception, so that in highly gender stratified communities, husbands' preferences have a greater effect than wives'.
Schuler and Hashemi (1994)	Bangladesh	Surveyed 1,248 women following ethnographic research in 6 villages.	Autonomy in household and community spheres: mobility (eg. number of places woman goes alone); economic security (eg. investments); decision-making power (eg. ability to make large purchases and history of domestic violence); political and legal awareness (eg. knowledge of name of gov't official); participation in public protests and political campaigning.	Contraceptive use.	Microcredit empowers women. Women who are empowered are more likely to use contraceptives. Credit participation and autonomy have independent effects on contraceptive use.
Schuler et al. (1995a)	Bolivia	Surveyed 363 women vendors and producers who received microcredit and 295 who did not, and conducted in-depth interviews with 30 women and 8 men on contraception.	Autonomy in household and community spheres (eg. whether woman holds office in trade association, receives household help from husband, tolerates violence, and participates in traditional support networks).	Contraceptive and modern health services use.	Microcredit has no effect on autonomy (except leadership in trade associations), decision-making, contraception or modern health services use, perhaps because these are not the right autonomy indicators for Bolivia.
Schuler et al. (1995b)	India	Analysed 50 life histories of self-employed women in Ahmedabad, including 32 members of SEWA, a women's NGO.	Autonomy in household and community spheres (same as for Schuler and Hashemi (1994) above, except that indicators of mobility were replaced with indicators of sense of self and vision of future, eg. saving for the future, and self-efficacy).	Contraceptive use.	SEWA is empowering women, but it does not translate into greater contraceptive use.

continued…

Table 2.2 (…continued): The Role of Autonomy on Other Outcomes of Interest

Authors	Location	Sample and Design	Indicators of Autonomy (as Independent or Intermediary Variable(s))	Dependent Variable(s)	Findings
			CHILD HEALTH AND WELL-BEING		
Basu and Basu (1991)	India	Census data 1981 along with qualitative data from 1988.	Women's labour force participation.	Child mortality and sex ratio in child mortality.	Women's employment leads to decrease in female child mortality compared to male child mortality.
Desai and Alva (1998)	22 developing countries	Children under 5 years old from 22 Demographic Health Surveys.	Education.	Infant mortality, height for age, and child immunisation status.	Child health does improve with maternal education, but mostly because education is a proxy for SES, not because it empowers women.
Haddad and Hoddinott (1994)	Cote d'Ivoire		Wives versus husband's share of cash income.	Children's height for age and weight for height.	Increasing wives' income share leads to better height for weight outcomes for sons but not daughters.
Kishor (1992)	India	Indian census of 1961 and 1981.	Women's economic worth (eg. labour force participation), kinship structure (eg. relative female migration), social stratification (eg. percentage of landless farm workers).	Relative child survival.	Increases in development are associated with decreases in relative female survival, perhaps by enabling parents to exercise preferences for sons.
Kishor (1993)	India	Indian census of 1981.	Women's economic worth (eg. labour force participation), kinship structure (eg. relative female migration), social stratification (eg. percentage of landless farm workers).	Gender differences in child mortality.	Kinship structure (culture) and female labour force participation (economy) are both important to gender differentials in early childhood mortality.
Kishor (2000b)	Egypt	1995-6 Egypt Demographic Health Survey.	32 indicators of behavioural and attitudinal factors grouped into 10 dimensions of autonomy.	Infant mortality and child immunisation status.	Different dimensions are relevant to different development indices.
Rao (1998)	India	177 women potters and 130 of their husbands, and interviewed 70 women and 30 men.	Women's characteristics (eg. education, number of living children, individual income) and household characteristics (eg. incidences of domestic violence against women, and net dowry).	Children's caloric consumption.	Domestic violence against women negatively affects children's caloric intake. Wife's income, education, and greater number of male children reduces domestic violence.

continued…

Table 2.2 (…continued): The Role of Autonomy on Other Outcomes of Interest

Authors	Location	Sample and Design	Indicators of Autonomy (as Independent or Intermediary variable(s))	Dependent Variable(s)	Findings
Thomas, Contreras, and Frankenberg (1997)	Indonesia	5,168 couples from the decision-making module in the 1997-8 Indonesia Family Life Survey.	Assets brought into marriage by husbands and wives.	Gender differentiation in child illnesses.	Sons of women with higher assets at marriage are less likely than their sisters to experience respiratory disorders.
			HOUSEHOLD CONSUMPTION AND WELL-BEING		
Hoddinott and Haddad (1995)	Cote d'Ivoire		Wives versus husband's share and control of cash income.	Household consumption.	Wive's share of cash income increases budget share spent of food and decreases budget share spent on clothing, meals eaten out, alcohol and cigarettes.
Pitt and Khandker (1998)	Bangladesh	Surveyed 1,528 households in 87 villages.	Amount of microcredit to women and men and women's control of resources .	Household consumption.	Credit to women but not men increases non-land assets held by women, male and female labour supply and boys' and girls' schooling. The impact of female borrowing on total per capita expenditure is twice as large as the impact of male borrowing.
Quisumbing and de la Briere (2000)	Bangladesh	Surveyed 826 households from 47 villages in 3 sites.	Women's assets at marriage and current assets.	Expenditure shares of food, clothing, children's education.	Wife's assets have a positive and significant effect on the share of expenditures on children's clothing and education while husband's current assets have a positive effect on food expenditure share.
Quisumbing and Maluccio (1999)	Bangladesh, Indonesia, Ethiopia, South Africa	IFPRI surveys of 826 households , 114 households, 1500 households and 500 households.	Women's assets at marriage.	Expenditure shares of food, education, health, children's clothing and schooling, alcohol/tobacco.	When women control more resources, expenditures on education increase, but not equally for girls and boys across nations. Effects on other expenditures vary by region.

continued…

Table 2.2 (…continued): The Role of Autonomy on Other Outcomes of Interest

Authors	Location	Sample and Design	Indicators of Autonomy (as Independent or Intermediary Variable(s))	Dependent Variable(s)	Findings
Thomas (1990 and 1997)	Brazil	Analysed data on 55,000 households from the Estudio Nacional da Despesa Familiar (ENDEF) Survey.	Male and female non-labour income, total income, and women's control of income.	Expenditure shares, nutrient intakes per capita in household, and child anthropometric outcomes.	Women's income is spent more on human capital investments and is associated with greater nutrient intake and better child health.
			REPRODUCTIVE HEALTH		
Beegle, Frankenberg and Thomas (2001)	Indonesia	Analysed data on about 2,000 couples from the 1997-8 Indonesia Family Life survey.	Women's characteristics (eg. individual assets, education, social status of family of origin, and education of father).	Prenatal care and hospital delivery.	Individual assets, education, and social status of a woman increase her chances of getting prenatal and delivery care.
Wolff et al. (2000)	Uganda	Surveyed 1,356 women and their stable partners and conducted 34 focus groups with women and men in 2 districts.	Negotiation and discussion of sex between partners.	Condom use.	The influence of marriage and women's work varies by district, but education and urban residence consistently enhance women's negotiating abilities.
			INVESTMENT IN DEVELOPMENT		
Chattopadhyay and Duflo (2001)	India	Surveyed 1/3 of all women councillors in 161 village councils and interviewed villagers in one village from each of 3 village council areas in Birbhum district, West Bengal.	Women's participation in village council (eg. questions, requests, and complaints from women at the village council).	Public goods investment in roads, drinking water, fuel equipment, education, and health.	Women are more likely to participate if the leader of the council is a woman and invest more in infrastructure that is directly relevant to rural women's needs (water, fuel, health, roads, etc.); men invest more in education.

Sources: Summarised from relevant studies along the lines of Malhotra et al. (2002).

2.4. Gaps in the Literature and Remedies

Given the strengths and limitations of various studies included in the review on this subject, we may claim to improve on the existing literature in four main dimensions. These are: measurements of autonomy; framework of analysis; identification of appropriate determinants relevant with the autonomy and appropriate methods of estimations.

A close look through the existing literature reflects that women's autonomy has not been measured effectively to adequately gauge women's decision-making power in the household. Most of the studies reviewed capture some portion of autonomy or attempt to measure it indirectly by using different proxies of autonomy. Therefore, forced measures of women's autonomy have mostly appeared significantly correlated with a wider range of other factors (called determinants) as observed in several previous studies. However, the causal relationship (between autonomy and its determinants) remains ambiguous in adequately identifying appropriate determinants of women's autonomy. The main reason for this limitation appears to be the data availability on that scale of issue. We overcome this issue, however, by using direct measures of women's autonomy, captured as the involvement of women in various decision-making aspects in the household.[8] The data allows us to include a relatively wider range of decision-making aspects including economic decision-making and family planning decision-making, relative to other individuals in the household. Further, the data also allows us to investigate these measures at the household level instead of aggregated measures of autonomy which has frequently been used in the previous literature.

Secondly, we attempt to introduce an encompassing framework of analysis by identifying the relevant threat options which may determine the level of women's bargaining power in the household.[9] For example, in addition to the earned income threat option of women, we introduce various formulations of household size which enormously influence the consumption and production-related behaviours in the household. Further, along with the threat options we include determinants capturing cultural backgrounds including household formations and family status to investigate their role in determining women's autonomy in the household. This aspect has seldom been discussed in the previous empirical literature on the subject. In the past, most of the studies we reviewed suffered in the helm of contextual debate. For instance, regarding the effect of microcredit extensions to women in Bangladesh, some of the studies show this as an effective determinant of women's autonomy whereas some reflect it as irrelevant. Similarly, some of the studies appear to support the conclusion that earned income increases autonomy, whereas others consider cultural factors to be more relevant to women's autonomy in the household.

Thirdly, we also improve on the existing methods of empirical analysis by incorporating the modified version of a multinomial logistic technique to investigate interesting research questions

[8] Detailed discussion is provided in Chapter 4.
[9] See Chapter 3 which provides a complete framework of analysis.

which have not previously been addressed.[10] Previous studies frequently use ordinary least squares methods or simple logit regression settings to estimate women's autonomy, which is mostly a discrete or ordered variable. These methods of estimations are sensitive to the nature of the variable of interest and usually give misleading results if corresponding assumptions are violated. Further, the ordered nature of women's autonomy index requires caution to ensure the partial effects of co-factors remain constant in ordered logistic estimations. However, we rarely find any study taking care of this aspect in estimations. This thesis, however, does take care of this aspect and presents detailed discussion by utilising appropriate methods of estimations in the empirical analysis. Fourth, we present empirical evidence on both aggregated and disaggregated levels of multidimensional autonomy for the overall sample as well as the urban and rural regions.[11]

2.5. Concluding Remarks

This Chapter has classified the existing literature on this subject into two main categories, respectively economics and other disciplines including demography, sociology and anthropology studies. Economic household decision-making theory highlights the concept of threat options linked with the bargaining power of spouses within various aspects of household decision-making. On the other hand, the other disciplines link women's autonomy with resource asset controls and cultural factors prevalent in the specific context of analysis.

Correspondingly, over time the literature has offered mixed results on the determinants of women's autonomy. In other words, we infer from these studies that women's autonomy is a contextual phenomenon and consequently there may be a complex number of indicators determining women's autonomy. This is largely due to the fact that most of the studies have relied on the indirect measures of women's autonomy, a strong indication of the lack of sufficient data available to most researchers. We have an advantage by accessing large scale micro-data information, based on the direct responses of women from thousands of households, allowing us to better measure the decision-making power of women in the household.

Additionally, we observe that most of the studies lack an appropriate theoretical framework of analysis, hence results are based on ad hoc formulations of empirical analysis. We overcome this issue by introducing an all-encompassing model based on the fundamental analytical method offered by microeconomics, along with other cultural factors derived from multiple approaches of various disciplines. This model provides us with a better understanding of the causal relationship of women's autonomy with corresponding determinants. Furthermore, we observe that many studies have relatively obsolete methods of empirical analysis which may provide misleading results due to violating necessary assumptions depending on the ordinal or binary nature of measures of autonomy. We overcome this problem by using a modified version of multinomial logistic regression methods

[10] Chapter 5 provides a detailed discussion.
[11] Correspondingly see Chapters 7, 8, 9 and 10.

depending on the validity of parallel line assumptions which has been mostly ignored in the previous literature.

Furthermore, we observe that most of the previous literature provides partial details of autonomy with the limited scope of studies. However, in this thesis we utilise almost all possible dimensions of women's involvement in household decision-making processes. Correspondingly, we present the aggregated and disaggregated analysis from the stratified sampling data information which depicts an entire population of one country. We also include the state fixed effects to examine their role in the multidimensionality of the concept of women's autonomy. This thesis, unlike many other studies, provides empirical evidence from an overall sample perspective, as well as from an urban and rural regional perspective.

CHAPTER 3

THEORETICAL FRAMEWORK OF ANALYSIS

3.1. Introduction

Chapter 2 discusses the relevant literature on the evolution of women's empowerment throughout various countries, and demonstrates the lack of adequate explanations as to the determinants of women's autonomy[1]. Despite the attempt of empirical literature to link women's empowerment to specific variables as the leading factors influencing women's autonomy, most of these studies present ad hoc models which demonstrate a lack of understanding of the issue in general and which fail to answer the most important question; what determines women's autonomy? Therefore, the identification of appropriate determinants of women's autonomy remains unresolved among policymakers and researchers. This thesis answers this question by addressing the fundamentals of household compositions by including family formation, household composition evolved over time subject to various factors which may influence women's autonomy in the household. It is important to note that household composition as a hypothetical determinant of women's autonomy has been ignored in the majority of existing theoretical and empirical research on this subject. This thesis attempts to incorporate the missing link of family evolution in terms of household composition in association with women's autonomy.

This Chapter presents a conceptual framework by identifying the appropriate channels through which women's autonomy may evolve in household decision-making settings. Correspondingly, it also brings forward the motivation of further empirical evidence of the determinants of women's autonomy. Section 3.2 presents the basic theoretical model of analysis and makes predictions based on relevant propositions and corollary. Section 3.3 discusses the relevancy of data consistent with the theoretical model followed by section 3.4 presenting relevant empirical conjectures. Lastly, section 3.5 presents the conclusion of the chapter.

[1] Eswaran et al. (2013), Eswaran and Malhotra (2011) and Anderson and Eswaran (2009) are exceptions.

3.2. The Model

Women's autonomy is commonly defined as 'an ability of women to make choices and decisions within the household relative to their male counterparts'.[3] Therefore it is relevant to note that the whole question of women's autonomy becomes irrelevant if the household is perceived as a monolithic unit with a single decision-maker. The above argument implies that the conventional unitary model of household decision-making does not help to explain the concept of women's autonomy at the household level. Folbre (1986) and Sen (1990) among others have suggested that households may be better modelled as conflictual (a state of disharmony) instead of atomistic to explain the concept of women's autonomy. Therefore, bargaining theory is observed in the context of household decision-making as the main contribution of economists[4] to the literature on women's autonomy. The bargaining theory reveals that women can be empowered by improving their threat options (utilities) which ensure wellbeing to the women when bargaining breaks down with their spouses'. Consequently, the standard bargaining models assume that women may improve their autonomy depending on the threat options they hold, relative to their husbands.

Therefore, the question of what determines autonomy requires identification of appropriate threat options in the conflictual scenario between spouses in the household. For instance, divorce could be the possible threat option breaking down of bargaining between spouses. However Lundberg and Pollak (1993) argue that instead of divorce, non-cooperative behaviour within marriage may be the relevant threat scenario. This could be the most appropriate characterisation in the developing countries of south Asia in general, and Pakistan in particular.

Likewise, Anderson and Eswaran (2009)[5] successfully establish earned income as a valid threat option which increases the bargaining power of women relative to their spouses in the household. They show that increasing earned income relative to unearned income, provides greater autonomy to women, and therefore claim that earned income is a valid threat utility, one that increases a woman's bargaining power relative to her husband in the household decision-making process. Recently, Eswaran et al (2013) indicated family status plays a vital role in determining women's autonomy unlike the earned status of women from India. However, the above studies ignore the relationship of family evolution (in terms of composition) to women's autonomy; a link which this study considers a significant factor in determining women's autonomy in the household. The family evolution, more specifically the family formation, makes the distinction between nuclear and extended family systems (or the joint family systems)

[3] As appeared in Anderson and Eswaran (2009) and others explained in Chapter 2.
[4] For instance McElroy and Horney (1981), Manser and Brown (1980) pioneered the approach; Chiappori (1988, 1992) presents a different approach to collective decision-making.
[5] Anderson and Eswaran follow Lundberg and Pollak's (1993) separate sphere model of household decision-making.

and further the size of household. The size of the household is precisely classified into two major categories referring to children and elderly persons including relatives of the husband residing at the same house. The thesis captures this aspect of family formation by introducing the size of the household as a threat option relevant to the bargaining power between spouses in the household, thus distinguishing itself from the study of Anderson and Eswaran (2009). In particular, household size has a significant impact on the decision-making process between spouses in the areas of household production and consumption. Accordingly, the modified framework of analysis in the non-cooperative settings to identify the relevancy of the threat option of household size to spousal bargaining power is presented.

The size of the household effectively defines the quantity and quality of the production of household public good. Household public good incorporates care of the elderly and children, and all other chores conventionally provided by women in developing South Asian countries. This explanation is emphasized in the special context of Pakistan which shares several commonalities with other regional states in South Asia. In general, Pakistan like other developing countries exhibits a conservative approach to the participation of women in the labour market. It implies that traditionally, women stay at home and men participate in the labour market outside of the household. For example activities accounting for round the clock time allow us to monitor how males and females allocate their time in or outside of the household. The Time Use Survey (TUS)[7] (2009) from Pakistan provides useful information for the time allocation of both females and males in different categories, typically known as the 'System of National Accounts' (SNA), Extended SNA and Non-SNA[8].

The survey finds that most of a female's productive life time is spent in housekeeping activities, however, they make an important input to the wellbeing of the household members. Participation rates of females in taking care of children, the sick and elderly (irrespective of marital status), is distinctly higher than for males. Interestingly, females who were 'currently married' had the highest rates, more than two times that of their male counterparts. Further, a female reflects many folds higher participation in the core household chores than a male. For example, female's participation rate above male's in cooking is 76 per cent, 62 per cent in household cleaning, 61 per cent cleaning utensils, 28 per cent in caring of children, 30 per cent in washing and mending cloths. However 7 per cent in shopping, 4 per cent in cultural and socialising, 3 per cent in mass and media use, 5 per cent in learning respectively less than that of

[7] This survey was conducted during 2007 and published in 2009. *"The results are representative at national and provincial level with rural-urban breakdown"*, Time Use Survey (2009).

[8] The SNA activities consist of primary and secondary production level activities. The primary activities include crop farming, animal husbandry, fishing, forestry, processing and storage, mining and quarrying. The secondary activities refer to construction, manufacturing and other activities such as trade, business and services. Extended SNA activities incorporate household maintenance, care of children, the sick and elderly and community services. The activities related to learning, social and cultural activities, mass media and personal care and self-maintenance are included as Non-SNA activities.

male's participation rate. Furthermore, 21 per cent work in establishment, 8 per cent in primary production and 5 per cent in non-establishment work less participation respectively compared with that of male's participation rate. Regarding female leisure activities, for example watching television, listening to music, reading the newspaper, sleeping, eating and socialising show rates 1.2 times higher compared with males. This clearly indicates the classified role of a woman within the household in Pakistani society. This explanation also broadly relates with Lundberg and Pollak (1993) formulation of the separate sphere model of the household, which has been lately followed by Anderson and Eswaran (2009) in the context of Bangladesh.

Therefore, based on the TUS, the use of a females and males time according to their respective activities, can be classified. A married woman may routinely use her time one of three ways. Firstly, by producing household goods through household keeping and taking care of children and other persons in the context of joint family system. This may include participation in unearned/unpaid work, for example working on farms or managing some business which is solely home based. Secondly, by working outside the household and earning an independent income. Therefore, by providing a credible means of committing her labour in the non-cooperative threat scenario, the introduction of an outside work opportunity for a woman impinges adversely on her spouse's threat utility. Further, the distinguishing feature of household size has important implications on the household public good production and so on her bargaining power as another threat utility on her spouse in the non-cooperative scenario. Thirdly, by taking part in leisure activities. Analogously, males tend to routinely use their time in only one of two ways, which is consistent with the cultural norms in other developing countries of South Asia. Firstly, by joining the labour market, he effectively cuts out his participation in public household production. Secondly, by taking part in leisure activities.

Consistent with this is the model of Anderson and Eswaran (2009), modified by incorporating the household composition in terms of family formation and size of the household classified into children and other persons. It is relevant to note that the current settings of the model offers broader perspective in terms of introducing two additional threat utilities which may influence the bargaining power in favour of females relative to males in household decision-making processes.[9]

The utility function of a woman can be assumed as:

$$U_f\left(x_f, z, l_f\right) = \beta_f \ln x_f + \gamma_f n_1 \ln\left(\frac{z}{n_1}\right) + \delta_f \ln l_f + \psi_f \ln\left(b - n_2\right) \qquad (3.1$$

[9] However for the purposes of simplicity and tractability, all notations and common explanations are identical to Anderson and Eswaran (2009).

where x_f, z and l_f respectively denote women's private consumption, household public consumption and leisure. The 'n_1' represents the number of children, $ln(z/n_1)$ is therefore the per-household utility from public good (z) and $n_1 ln(z/n_1)$ the total utility of the household from the public good. This specification assumes that individuals derive utility from living together (marriage and having children as captured by the multiplication of n_1). However household size may also be assumed a drag on the public good and reduces utility which is captured by the $ln(z/n_1)$ term. Further the term $\ln(b-n_2)$ captures the wife's preference for joint family system where n_2 precisely refers to the persons other than own children living at the house. You may notice later that (b-n_2) determines the effectiveness of wife's contribution to the public good which decreases as n_2 increases. The wife derives disutility from joint family system and vice versa when $\psi_f > 0$. Further notice that the utility function is still linear in endogenous inputs $(x, z, \text{and } l)$ as 'n_1' and 'n_2' are exogenously determined.

As explained previously, time allocation can be classified into housework tasks and working outside of the house for an independent income, correspondingly it can be denoted by e_f^1 and e_f^2 hence leisure is given as $l_f = 1 - e_f^1 - e_f^2$. The above utility function can be normalized as; $0 \le \beta_f, \gamma_f, \delta_f, \psi_f \le 1$ and $\beta_f + \gamma_f + \delta_f = 1$[10].

Analogously the spouse's utility function can be shown as:

$$U_m(x_m, z, l_m) = \beta_m \ln(x_m) + \gamma_m n_1 \ln\left(\frac{z}{n_1}\right) + \delta_m \ln(l_m) + \psi_m \ln(n_2) \qquad (3.2$$

where x_m denotes husband's private consumption and l_m leisure. Husband's leisure is the amount of time remaining after labour work, therefore $l_m = 1 - e_m$. The term $\ln(n_2)$ captures husband's preferences for the joint family systems. Like the wife's utility function, when $\psi_m < 0$ ($\psi_m > 0$), the husband derives disutility (utility) from joint family system. Similarly the preference parameters can be normalised as, $0 \le \beta_m, \gamma_m, \delta_m, \psi_m \le 1$ and $\beta_m + \gamma_m + \delta_m = 1$.

Furthermore, it is assumed that the wife provides labour (e_f^1) and the husband provides income (y_m), towards the production of the household public good expenses. Correspondingly,

[10] Notice that $\beta_f + \gamma_f + \delta_f + \psi_f > 1$ (<1) when $\psi_f > 0$ (<0). This means preference for joint family is treated as externality. This is appropriate as the last term is exogenous and does not play any role in the optimal solution.

in non-cooperative scenarios where a husband and wife specialize in their traditional roles, it can be assumed that a wife provides labour (not income) and a husband provides a financial contribution (not labour) in the production of the household public good [11]. This clearly demonstrates that women and men operate in separate spheres [13] and financial resources generally fall in the hands of men. This appears most relevant to traditions in South Asia and Pakistan in particular, where men and women have separate responsibilities.

The assumption is that production function for the household public good uses the wife's labour and the husband's income (y_m) towards household expenses. For simplicity and tractability it is assumed the production function is linear in its inputs as shown in the following:

$$z = f(y_m, e_f^1) = (y_m + (b - n_2)e_f^1),\ b > 0 \qquad (3.3$$

It may be relevant to note that the second term in the above production function shows the wife's effective contribution to the production of household public good in the context of the joint family system. The above also amounts the availability of net consumption for the husband and wife in the joint family system. This specification assumes that the wife's contribution to the public good is decreasing in the non-children family members. The more the non-children family members, the less valuable is her contribution to the public good. .

According to standard bargaining models, the allocation of resources is determined by the threat utilities of each individual. Similarly, the allocation of inputs is determined by the threat option which is defined by the non-cooperative outcome within marriage[14] in this model. To reiterate a point made by Anderson and Eswaran (2009), divorce is not the relevant fall back option in developing countries of South Asia. Furthermore, this thesis posits that in developing countries, women tend to have children as an outcome of their marriage, to deter the threat of divorce from a male counterpart. This is the key reason for identifying children (as part of the total household size) as a threat option of women, in the non-cooperative scenario within marriage. It is also assumed that both husband and wife follow Nash conjectures which imply that partners make strategic decisions regarding their choices in the non-cooperative scenario.

[11] As demonstrated in Lundberg and Pollak (1993) and also assumed in Anderson and Eswaran (2009).
[13] Lundberg and Pollak (1993) provide convincing arguments about the general validity of the separate sphere model.
[14] As mentioned in Anderson and Eswaran (2009) who follow Woolley (1988), Lundberg and Pollak (1993) and Chen and Woolley (2001).

Eliminating the wife's budget constraint by substituting $x_f = \left(w_f e_f^2 + R_f\right)\big/ p_f$ and $z = y_m + (b - n_2)e_f^1$ into her objective function, correspondingly wife's optimization problem in this situation may be produced as:

$$\left.\begin{aligned} \max_{x_f, e_f^1, e_f^2} U_f &= \beta_f \ln\left(\frac{w_f e_f^2 + R_f}{p_f}\right) + \gamma_f n_1 \ln\left(\frac{y_m + (b - n_2)e_f^1}{n_1}\right) + \delta_f \ln\left(1 - e_f^1 - e_f^2\right) \\ &\quad + \psi_f \ln\left(b - n_2\right) \\ s.t. \quad & 0 \le e_f^1,\ e_f^2 \le 1,\ e_f^1 + e_f^2 \le 1,\ p_f x_f \le w_f e_f^2 + R_f \end{aligned}\right\} \quad (3.4$$

where $'p_f'$ is the price of the wife's private good consumption and $'w_f'$ is the implicit wage rate she earns in her independent income earning activity. $'R_f'$ denotes a wife's endowments.

Analogously eliminating the husband's budget constraint by substituting $x_m = \left(w_m e_m + R_m - y_m\right)\big/ p_m$ and $z = y_m + (b - n_2)e_f^1$ in his objective function. Correspondingly, husband's optimization problem can be shown as:

$$\left.\begin{aligned} \max_{x_m, e_m} U_m &= \beta_m \ln\left(\frac{w_m e_m + R_m - y_m}{p_m}\right) + \gamma_m n_1 \ln\left(\frac{y_m + (b - n_2)e_f^1}{n_1}\right) + \delta_m \ln\left(1 - e_m\right) \\ &\quad + \psi_m \ln(n_2) \\ s.t. \quad & 0 \le e_m \le 1,\ p_m x_m + y_m \le w_m e_m + R_m \end{aligned}\right\} \quad (3.5$$

where ' p_m ' is the price of the husband's private good consumption, ' w_m ' is the wage rate in the labour market and $'R_m'$ denotes a husband's endowments.

The assumed utility functions for each individual (husband and wife), marginal consumption remains positive, implying not to be zero. Therefore, to avoid zero marginal utilities, it is assumed the implicit wage rate $'w_f'$ and endowments $'R_f'$ of the wife are relatively small compared with the wage ' w_m ' rate and endowments $'R_m'$ of the husband.

The first order conditions (FOCs) under Nash conjectures for the wife's optimization problem are given as:

$$\frac{\partial U_f}{\partial e_f^1} = \frac{(b-n_2)\gamma_f n_1}{\left(y_m + (b-n_2)e_f^1\right)} - \frac{\delta_f}{\left(1-e_f^1-e_f^2\right)} = 0 \quad (3.6$$

$$\frac{\partial U_f}{\partial e_f^2} = \frac{\beta_f w_f}{\left(w_f e_f^2 + R_f\right)} - \frac{\delta_f}{\left(1-e_f^1-e_f^2\right)} = 0 \quad (3.7$$

Similarly, the first order conditions under Nash conjectures for the husband's optimization problem are given as:

$$\frac{\partial U_m}{\partial y_m} = -\frac{\beta_m}{\left(w_m e_m + R_m - y_m\right)} + \frac{n_1\gamma_m}{\left(y_m + (b-n_2)e_f^1\right)} = 0 \quad (3.8$$

$$\frac{\partial U_m}{\partial e_m} = \frac{\beta_m w_m}{\left(w_m e_m + R_m - y_m\right)} - \frac{\delta_m}{\left(1-e_m\right)} = 0 \quad (3.9$$

In the fully interior Nash equilibrium, all variables of interest (decision-making) are strictly positive and the four first order conditions yield equations that turn out to be linear and, solved explicitly. Therefore, the Nash equilibrium is the solution to FOCs, 3.6 to 3.9 correspondingly for e_f^1, e_f^2, y_m and e_m such as:

$$(b-n_2)\left(\delta_f + n_1\gamma_f\right)e_f^1 + (b-n_2)n_1\gamma_f e_f^2 + \delta_f y_m + 0e_m = (b-n_2)n_1\gamma_f \quad (3.6*$$

$$\beta_f w_f e_f^1 + w_f\left(\delta_f + \beta_f\right)e_f^2 + 0y_m + 0e_m = \beta_f w_f - \delta_f R_f \quad (3.7*$$

$$0e_f^1 + 0e_f^2 - \delta_m y_m + w_m\left(\delta_m + \beta_m\right)e_m = \beta_m w_m - \delta_m R_m \quad (3.8*$$

$$(b-n_2)\beta_m e_f^1 + 0e_f^2 + \left(\beta_m + n_1\gamma_m\right)y_m - n_1\gamma_m w_m e_m = n_1\gamma_m R_m \quad (3.9*$$

The solutions to the above system of equations are as follows:

$$e_f^1 = \frac{\left[(b-n_2)\gamma_f\left(w_f + R_f\right) - \gamma_m w_f\left(\beta_f + \delta_f\right)\left(w_m + R_m\right) + (b-n_2)\gamma_f\left(w_f + R_f\right)(n_1-1)\gamma_m\right]}{(b-n_2)w_f\left[\gamma_f + \gamma_m\left(\beta_f + \delta_f\right) + \gamma_f\gamma_m(n_1-1)\right]} \quad (3.10$$

$$e_f^2 = \frac{\left[\beta_f \gamma_m w_f \left(R_m + w_m + \left(b - n_2\right)\right) - \left(b - n_2\right)\left[\gamma_f + \gamma_m \delta_f + \left(n_1 - 1\right)\gamma_f \gamma_m\right] R_f\right]}{\left(b - n_2\right) w_f \left[\gamma_f + \gamma_m \left(\beta_f + \delta_f\right) + \gamma_f \gamma_m \left(n_1 - 1\right)\right]} \quad (3.11$$

$$y_m = \frac{\left[\gamma_m w_f \left[1 + \left(n_1 - 1\right)\gamma_f\right]\left(w_m + R_m\right) - \left(b - n_2\right)\gamma_f \left(\beta_m + \delta_m\right)\left(R_f + w_f\right)\right]}{w_f \left[\gamma_f + \gamma_m \left(\beta_f + \delta_f\right) + \gamma_f \gamma_m \left(n_1 - 1\right)\right]} \quad (3.12$$

$$e_m = \frac{\left[w_f w_m \left(\gamma_m + \beta_m \gamma_f\right) - \gamma_f \delta_m w_f \left(\left(b - n_2\right) + R_m\right) - \left(b - n_2\right)\gamma_f \delta_m R_f + w_f w_m \left(n_1 - 1\right)\gamma_f \gamma_m\right]}{w_f w_m \left[\gamma_f + \gamma_m \left(\beta_f + \delta_f\right) + \gamma_f \gamma_m \left(n_1 - 1\right)\right]} \quad (3.13$$

Each partner forms his/her best response function depending on the contribution of the other. Therefore, a wife's best response function may include a desire to increase the size of the household by having more children, however, increasing the number of elderly persons and relatives of the husband may neutralise this effect. Similarly, a wife's best response may be greater time allocation towards producing the household's public good as well as participating in the labour market to earn an independent income, depending on a husband's financial contribution towards the household public good production. The best response of the husband, which mainly includes the financial contribution towards the household public good, depends on the size of the household, the wife's contribution to the public household good and her participation in the labour market for earned income. The above assumptions regarding preferences and the inputs of the household public good production, the household size, a husband's financial contribution and wife's time allocation can be transformed as strategic substitutes between the partners.

In the above scenario it is expected that both increasing income and number of children would increase a wife's utility in the non-cooperative equilibrium. However the household size in general may reflect an ambiguous relationship with a wife's utility depending on the dominant component of the household size. Referring to the basic asymmetry in method, it is obvious that a wife's utility also depends on her husband's threat utility.

The following four propositions and one corollary observe the effects of an increase in earned income, unearned income and household size in the context of children and non-children members' s spousal threat utility in Nash equilibrium settings.

Proposition 1: *In the equilibrium,*[15] *an increase in the wife's unearned income is expected to: (a) increase the time she devotes to the production of the public good, (b) reduce the amount of time she devotes to earning independent income, (c) increase her consumption of leisure, (d) decrease her husband's contribution to the public good, and (e) reduce the amount of time her husband works.*

In the following we present the proofs of proposition 1 regarding the different effects of increasing unearned income (R_f) as a wife's best strategy.[16]

Proof of proposition 1:

a) $$\frac{\partial e_f^1}{\partial R_f} = \frac{\gamma_f[1+\gamma_m(n_1-1)]}{w_f[\gamma_f+\gamma_m(\beta_f+\delta_f)+\gamma_f\gamma_m(n_1-1)} > 0 \qquad (3.14$$

b) $$\frac{\partial e_f^2}{\partial R_f} = \frac{-\left[\gamma_f+\gamma_m\delta_f+(n_1-1)\gamma_f\gamma_m\right]}{w_f\left[\gamma_f+\gamma_m(\beta_f+\delta_f)+\gamma_f\gamma_m(n_1-1)\right]} < 0 \qquad (3.15$$

c) $$\frac{\partial l_f}{\partial R_f} = \frac{\gamma_m\gamma_f}{(b-n_2)w_f(\gamma_f+\gamma_m(\beta_f+\delta_f)+\gamma_f\gamma_m(n_1-1)} > 0 \qquad (3.16$$

d) $$\frac{\partial y_m}{\partial R_f} = \frac{-(b-n_2)\gamma_f(\beta_m+\delta_m)}{w_f\left[\gamma_f+\gamma_m(\beta_f+\delta_f)+\gamma_f\gamma_m(n_2-1)\right]} < 0 \qquad (3.17$$

e) $$\frac{\partial e_m}{\partial R_f} = \frac{-(b-n_2)\gamma_f\delta_m}{w_f w_m\left[\gamma_f+\gamma_m(\beta_f+\delta_f)+\gamma_f\gamma_m(n_1-1)\right]} < 0 \qquad (3.18$$

Consistent with cultural norms, the results regarding increasing a wife's unearned income increases her time allocation in household public good production. Correspondingly, the increasing unearned income may enhance a wife's private consumption and lower the marginal

[15] A fully interior Nash equilibrium is assumed in all propositions presented in this section.
[16] All results (proofs) of corresponding propositions based on a simple method which strictly follows specified constraints along with utility optimisation problems.

utility. Therefore the increasing unearned income predicts two distinct outcomes; increasing a wife's contribution towards public good production and increasing her private consumption.

Furthermore, increasing unearned income also provides sufficient reason for women to stay at home and not participate in the labour market for an independent income. It reinforces the common effect of having greater leisure time allocation in association with increasing unearned income. Increasing unearned income increases her threat utility also hence less motivation for working outside of the household for independent income. For example, a large proportion of women is homestead or working as full time housewives in Pakistani society. Likewise, higher unearned income or endowments of a wife have almost identical effects on her male counterpart. This implies that a husband also provides less financial contribution in the household public good production at the cost of his wife's endowments. Correspondingly, a husband tends to decrease his working hours in the labour market to contribute in the household public good production and increases his leisure allocation. Therefore, the above effects can be differentiated into income and substitution effects in the context of a partner's revealed preferences.

The following proposition 2 corresponds to the increase in a wife's earned income.

Proposition 2: *Similar to proposition 1, an increase in a wife's implicit wage rate is expected to: (a) decrease the amount of time she devotes to the public good, (b) increase the amount of time she devotes to earning income, (c) increase her husband's contribution to the public good, (d) increase the amount of time the husband works in the labour market, and (e) decrease the husband's private good consumption.*

In the following we present the proofs of proposition 2 regarding different effects of increasing earned income (W_f) as a wife's best strategy.

Proof of proposition 2:

a) $$\frac{\partial e_f^1}{\partial w_f} = \frac{-\gamma_f \left[1+\left(n_1-1\right)\gamma_m\right] R_f}{\left(w_f\right)^2 \left[\gamma_f + \gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_1-1\right)\right]} < 0 \qquad (3.19$$

b) $$\frac{\partial e_f^2}{\partial w_f} = \frac{\left[\gamma_f + \gamma_m\delta_f+\left(n_1-1\right)\gamma_f\gamma_m\right] R_f}{\left[\gamma_f + \gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_1-1\right)\right]\left(w_f\right)^2} > 0 \qquad (3.20$$

c) $$\frac{\partial y_m}{\partial w_f} = \frac{(b-n_2)\gamma_f(\beta_m+\delta_m)R_f}{(w_f)^2\left[\gamma_f+\gamma_m(\beta_f+\delta_f)+\gamma_f\gamma_m(n_1-1)\right]} > 0 \quad (3.21$$

d) $$\frac{\partial e_m}{\partial w_f} = \frac{(b-n_2)\gamma_f\delta_m R_f}{(w_f)^2 w_m\left[\gamma_f+\gamma_m(\beta_f+\delta_f)+\gamma_f\gamma_m(n_1-1)\right]} > 0 \quad (3.22$$

e) $$\frac{\partial x_m}{\partial w_f} = \frac{-(b-n_2)\gamma_f\beta_m R_m}{p_m(w_f)^2(\gamma_f+\gamma_m(\beta_f+\delta_f)+\gamma_f\gamma_m(n_1-1)} < 0 \quad (3.23$$

Results show that increasing a wife's earned income motivates her to allocate more time for working outside of the household for an independent income. Conversely the above effect may reduce her leisure time thereby increasing marginal utility from leisure and potentially diminishing her input into production of the household public good. However, more time allocated working outside the household may reduce a wife's time input in household public good production. Results also show that with increasing earned income the private consumption of a wife also increases, thus providing more freedom to make independent choices.

As a result of this, a husband would allocate more time working in the labour market hence requires more input contribution in household public good production. He may also have less time available for leisure. As more time is required in household production and working in the labour market, the result may be a decrease in private consumption. Therefore, in the non-cooperative situation an increase in the earned income of a wife not only increases her time allocation towards work in the labour market, but also increases her spouse's time working in the labour market.

The following proposition 3 presents the effects of increasing the size of a household.

Proposition 3: *In the equilibrium, an increase in the size of the household (own children) is expected to: (a) increase the amount of time a wife devotes to the public good, (b) decrease the amount of time she devotes to earning an independent income, (c) decrease the total amount of leisure time depending on the proportionate change in time allocated to the public good and earning an independent income, (d) decrease the wife's private good consumption (e) increase the husband's contribution to the household public good production, (f) increase the amount of time the husband works in the labour market, (g) decrease the husband's private good consumption.*

In the following, we present results of proposition 3 regarding effects of increasing size of the household (n_1) in association with spouses contributions to the household public good production, private consumption and leisure.

Proof of proposition 3:

a) $$\frac{\partial e_f^1}{\partial n_1} = \frac{\gamma_f \gamma_m^2 \left(\beta_f + \delta_f\right)\left[\left(b - n_2\right)R_f + \left(b - n_2\right)w_f + R_m w_f + w_f w_m\right]}{w_f \left(b - n_2\right)\left[\left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m\right)^2\right]} > 0 \qquad (3.24$$

b) $$\frac{\partial e_f^2}{\partial n_1} = -\frac{1}{\left(b - n_2\right)} \beta_f \gamma_f \frac{\gamma_m^2}{w_f} \frac{\left(b - n_2\right)R_f + \left(b - n_2\right)w_f + R_m w_f + w_f w_m}{\left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m\right)^2} < 0 \qquad (3.25$$

c) $$\frac{\partial l_f}{\partial n_1} = \left(1 - \frac{\partial e_f^1}{\partial n_1} - \frac{\partial e_f^2}{\partial n_1}\right) \qquad (3.26$$

$$\frac{\partial l_f}{\partial n_1} = -\frac{\partial e_f^1}{\partial n_1} - \frac{\partial e_f^2}{\partial n_1}$$

$$= -\frac{\gamma_m^2 \gamma_f \delta_f \left[\left(b - n_2\right)R_f + \left(b - n_2\right)w_f + R_m w_f + w_f w_m\right]}{\left(b - n_2\right)w_f \left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m\right)^2} < 0$$

$$\frac{\partial x_f}{\partial n_1} = \frac{w_f}{p_f} \frac{\partial e_f^2}{\partial n_1} \qquad (3.27$$

$$= -\frac{1}{\left(b - n_2\right)} \beta_f \gamma_f \frac{\gamma_m^2}{p_f} \frac{\left(b - n_2\right)R_f + \left(b - n_2\right)w_f + R_m w_f + w_f w_m}{\left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m\right)^2} < 0$$

e)

$$\frac{\partial y_m}{\partial n_1} = \frac{\gamma_m \gamma_f \begin{pmatrix} \gamma_f R_m w_f - \gamma_m R_m w_f + \gamma_f w_f w_m - \gamma_m w_f w_m + (b - n_2)\gamma_f \left(\beta_m R_f + \delta_m R_f + \beta_m w_f + \delta_m w_f\right) + \\ \beta_f \gamma_m R_m w_f + \delta_f \gamma_m R_m w_f + \beta_f \gamma_m w_f w_m + \delta_f \gamma_m w_f w_m \end{pmatrix}}{w_f \left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m\right)^2} > 0 \quad (3.28$$

f) $$\frac{\partial e_m}{\partial n_1} = -\frac{\gamma_m \gamma_f \begin{pmatrix} \gamma_f w_f w_m - \gamma_m w_f w_m + (b - n_2)\gamma_f \left(\delta_m R_f + \delta_m w_f\right) + \gamma_f \delta_m R_m w_f \\ + \beta_f \gamma_m w_f w_m - \gamma_f \beta_m w_f w_m + \delta_f \gamma_m w_f w_m \end{pmatrix}}{w_f w_m \left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m\right)^2} < 0 \quad (3.29$$

g)

$$\left.\begin{aligned} \frac{\partial x_m}{\partial n_1} &= \left[\frac{w_m}{p_m}\right]\frac{\partial e_m}{\partial n_1} - \left[\frac{1}{p_m}\right]\frac{\partial y_m}{\partial n_1} \\ &= -\frac{\gamma_f \gamma_m \begin{bmatrix} \gamma_f \beta_m w_f \left(w_m - (b - n_2)\left(R_f - 1\right)\right) - \gamma_m R_m w_f \left(1 - \delta_f - \beta_f\right) \\ -\gamma_f R_m w_f \left(\delta_m - 1\right) \end{bmatrix}}{p_m w_f \left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m\right)^2} < 0 \end{aligned}\right\} \quad (3.30$$

The results depict that increasing the household size (children) requires a wife's greater time allocation to produce household public good. Correspondingly it lowers the time availability to participate in the labour market to earn an independent income, and also lowers time for leisure. Further results show that by increasing the household size, a wife's private consumption is adversely affected.

Along similar lines, increasing the household size requires a greater financial contribution from the husband towards the household public good production. Correspondingly, he may be required to extend the amount of hours he spends in the labour market. Further results also indicate that increasing the household size decreases a husband's private consumption and leisure. Therefore, in the situation of non-cooperation, increasing the household size in terms of increasing the number of children requires husbands to contribute more financial input in the household public good at the cost of his private consumption and leisure. The results are clearly supported by the common observation of South Asian countries where there is a high dependency ratio. Interestingly, in this situation it may not be necessary that leisure time of wife also increases subject to increasing the household size provided that she is not working in the labour market for independent income. In the context of South Asian countries generally and Pakistan in particular, most of the responsibility is associated with a husband's contribution where women are mostly homesteads.

Proposition 4: *In the equilibrium, an increase in the size of the household* (n_2) *is expected to: (a) decrease the amount of time a wife devotes to the public good, (b) increase the amount of time she devotes to earning an independent income, (c) increase the husband's contribution to the household public good production, (d) increase the amount of time the husband works in the labour market.*

In the following, we present results of proposition 4 regarding effects of increasing size of the household (n_2) in association with spouses contributions to the household public good production, private consumption and leisure.

Proof of proposition 4:

It is straight forward to show that

a) $$\frac{\partial e_f^1}{\partial n_2} = -\frac{\gamma_m w_f \left(\beta_f + \delta_f\right)\left(w_m + R_m\right)}{\left(b - n_2\right)^2 w_f \left[\gamma_f + \gamma_m \left(\beta_f + \delta_f\right) + \gamma_f \gamma_m \left(n_1 - 1\right)\right]} < 0 \qquad (3.31$$

b) $$\frac{\partial e_f^2}{\partial n_2} = \frac{\beta_f \gamma_m w_f \left(R_m + w_m\right)}{\left(b - n_2\right)^2 w_f \left[\gamma_f + \gamma_m \left(\beta_f + \delta_f\right) + \gamma_f \gamma_m \left(n_1 - 1\right)\right]} > 0 \qquad (3.32$$

c) $$\frac{\partial y_m}{\partial n_2} = \frac{\gamma_f \left(\beta_m + \delta_m\right)\left(R_f + w_f\right)}{w_f \left[\gamma_f + \gamma_m \left(\beta_f + \delta_f\right) + \gamma_f \gamma_m \left(n_1 - 1\right)\right]} > 0 \qquad (3.33$$

d) $$\frac{\partial e_m}{\partial n_2} = \frac{\gamma_f \delta_m \left(w_f + R_f\right)}{w_f w_m \left[\gamma_f + \gamma_m \left(\beta_f + \delta_f\right) + \gamma_f \gamma_m \left(n_1 - 1\right)\right]} > 0 \qquad (3.34$$

From the above four propositions, the following corollary is drawn.

Corollary 1**:** *(a) An increase in the wife's unearned income increases the threat utility of both spouses, while (b) an increase in the wife's earned income increases her threat utility but decreases the husband's threat utility and similarly (c) an increase in the household size (the number of own children) may increase or decrease threat utilities depending upon the values of preference parameters. ; and d)* an increase in the non-children household size (n_2) component

increases wife's threat utility when she has strongly negative preference for joint family system and decreases the husband's threat utility when his preference for joint family system is negative or not strongly positive.

In the following we present the results of this corollary in connection with the effects of increasing unearned income, earned income, and size of the household on spouses' threat utilities. The results show that increasing unearned income increases a wife's time input towards household production thereby increasing her consumption and leisure. Likewise, it increases a husband's private consumption and leisure thereby decreasing his working time in the labour market.

Proof of corollary 1:

From equation 3.4:

$$U_f = \beta_f \ln\left(\frac{w_f e_f^2 + R_f}{p_f}\right) + \gamma_f n_1 \ln\left(\frac{y_m + (b - n_2)e_f^1}{n_1}\right) + \psi_f \ln(b - n_2) + \delta_f \ln\left(1 - e_f^1 - e_f^2\right)$$

Notice the term $\psi_f \ln(b - n_2)$ which implies that the wife derives negative utility from the drop in her ability to contribute to the public good.

From the above equation 3.4, we can write as:

$$w_f e_f^2 + R_f = \frac{\beta_f \gamma_m \left[w_f (R_m + w_m + b - n_2) + (b - n_2) R_f \right]}{(b - n_2)\left[\gamma_f + \gamma_m (\beta_f + \delta_f) + \gamma_f \gamma_m (n_1 - 1) \right]}$$

$$y_m + (b - n_2)e_f^1 = \frac{n\gamma_f \gamma_m \left[(w_m + R_m + b - n_2) + \frac{(b - n_2) R_f}{w_f} \right]}{\left[\gamma_f + \gamma_m (\beta_f + \delta_f) + \gamma_f \gamma_m (n_1 - 1) \right]}$$

$$1 - e_f^1 - e_f^2 = \frac{\gamma_m \delta_f (b - n_2 + R_m + w_m) + (b - n_2)\gamma_m \delta_f \frac{R_f}{w_f}}{(b - n_2)\left[\gamma_f + \gamma_m (\beta_f + \delta_f) + \gamma_f \gamma_m (n_1 - 1) \right]}$$

Similarly from equation 3.5,

$$U_m = \beta_m \ln\left(\frac{w_m e_m + R_m - y_m}{p_m}\right) + \gamma_m n_1 \ln\left(\frac{y_m + b e_f^1}{n_1}\right) + \delta_m \ln(1 - e_m) + \psi_m \ln(n_2)$$

From the above equation 3.5, further we can write as:

$$w_m e_m - y_m + R_m = \frac{\gamma_f \left[\beta_m \left(w_m + b - n_2 \right) + \left(1 - \delta_m + \gamma_m \right) R_m + \dfrac{\left(b - n_2 \right) \beta_m R_f}{w_f} \right]}{\left[\gamma_f + \gamma_m \left(\beta_f + \delta_f \right) + \gamma_f \gamma_m \left(n_1 - 1 \right) \right]}$$

$$y_m + \left(b - n_2 \right) e_f^1 = \frac{n_1 \gamma_f \gamma_m \left[\left(w_m + R_m + b - n_2 \right) + \dfrac{\left(b - n_2 \right) R_f}{w_f} \right]}{\left[\gamma_f + \gamma_m \left(\beta_f + \delta_f \right) + \gamma_f \gamma_m \left(n_1 - 1 \right) \right]}$$

$$\left(1 - e_m \right) = \frac{\delta_m \gamma_f \left[w_m + \left(b - n_2 + R_m \right) + \left(b - n_2 \right) \dfrac{R_f}{w_f} \right]}{w_m \left[\gamma_f + \gamma_m \left(\beta_f + \delta_f \right) + \gamma_f \gamma_m \left(n_1 - 1 \right) \right]}$$

Proof: a) an increase in the wife's unearned income increases the threat utility of both spouses.

Therefore,

$$\frac{\partial \overline{U}_f}{\partial R_f} = \frac{\gamma_m \gamma_m \left(\left(b - n_2 \right) \gamma_f^2 n_1 + w_f \beta_f^2 \right)}{w_f \left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m \right)} > 0 \qquad \text{(3.31}$$

Alternatively,

$$\frac{\partial \overline{U}_f}{\partial R_f} = \left(\frac{\beta_f}{w_f e_f^2 + R_f} \right) \frac{\partial \left(w_f e_f^2 + R_f \right)}{\partial R_f} + \left(\frac{n_1 \gamma_f}{y_m + \left(b - n_2 \right) e_f^1} \right) \frac{\partial \left(y_m + \left(b - n_2 \right) e_f^1 \right)}{\partial R_f} \Bigg\}$$
$$+ \frac{\delta_f}{1 - e_f^1 - e_f^2} \frac{\partial \left(1 - e_f^1 - e_f^2 \right)}{\partial R_f}$$

Since all terms are positive, $\dfrac{\partial \overline{U}_f}{\partial R_f} > 0$

and similarly,

$$\frac{\partial \overline{U}_m}{\partial R_f} = \frac{\left(b - n_2 \right) \gamma_f \left[\delta_m^2 + w_m \left(\beta_m^2 + n_1 \gamma_m^2 \right) \right]}{w_f w_m \left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m \right)} > 0 \qquad \text{(3.32}$$

Alternatively,

$$\overline{U}_m = \beta_m \ln\left(\frac{w_m e_m + R_m - y_m}{p_m}\right) + \gamma_m n_1 \ln\left(\frac{y_m + (b-n_2)e_f^1}{n_1}\right) + \delta_m \ln(1-e_m) + \psi_m \ln(n_2)$$

$$\left.\begin{aligned}\frac{\partial \overline{U}_m}{\partial R_f} &= \left(\frac{\beta_m}{w_m e_m + R_m - y_m}\right)\frac{\partial(w_m e_m + R_m - y_m)}{\partial R_f} \\ &+\left(\frac{\gamma_m n_1}{y_m + (b-n_2)e_f^1}\right)\frac{\partial\left(y_m + (b-n_2)e_f^1\right)}{\partial R_f} + \frac{\delta_m}{(1-e_m)}\frac{\partial(1-e_m)}{\partial R_f}\end{aligned}\right\}$$

Since all terms are positive therefore $\frac{\partial \overline{U}_m}{\partial R_m} > 0$ is true.

Proof: b) an increase in the wife's wage rate increases her threat utility but decreases the husband's.

$$\frac{\partial \overline{U}_f}{\partial w_f} = \frac{\gamma_m\left[(b-n_2)R_f\left((b-n_2)n_1\gamma_f - \delta_f^2\right) + \beta_f\gamma_m w_f^2\left\{(b-n_2) + \beta_f\left(R_m + w_m\right)\right\}\right]}{(b-n_2)w_f^2\left(\gamma_f + \beta_f\gamma_m - \gamma_f\gamma_m + \delta_f\gamma_m + n_1\gamma_f\gamma_m\right)} > 0 \qquad (3.33$$

Alternatively,

$$\frac{\partial \overline{U}_f}{\partial w_f} = \left(\frac{\beta_f}{w_f e_f^2 + R_f}\right)\frac{\partial\left(w_f e_f^2 + R_f\right)}{\partial w_f} + \left(\frac{n_1\gamma_f}{y_m + be_f^1}\right)\frac{\partial\left(y_m + (b-n_2)e_f^1\right)}{\partial w_f} + \left(\frac{\delta_f}{1-e_f^1-e_f^2}\right)\frac{\partial\left(1-e_f^1-e_f^2\right)}{\partial w_f}$$

or

$$\left.\begin{aligned}\frac{\partial \overline{U}_f}{\partial w_f} &= \left(\frac{\beta_f}{w_f e_f^2 + R_f}\right)\frac{\beta_f\gamma_m\left(R_m + w_m + b - n_2\right)}{(b-n_2)\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1 - 1)\right]} \\ &-\left(\frac{n_1\gamma_f}{y_m + (b-n_2)e_f^1}\right)\frac{(b-n_2)n_1\gamma_f\gamma_m R_f}{(w_f)^2\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1 - 1)\right]} \\ &-\left(\frac{\delta_f}{1-e_f^1-e_f^2}\right)\frac{(b-n_2)\delta_f\gamma_m R_f}{(w_f)^2(b-n_2)\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1 - 1)\right]}\end{aligned}\right\}$$

$$\left.\begin{aligned}\frac{\partial \overline{U}_f}{\partial w_f} &= \frac{\beta_f \gamma_m \left(R_m + w_m + b - n_2\right)}{\gamma_m \left[w_f \left(R_m + w_m + b - n_2\right) + \left(b - n_2\right) R_f \right]} - \frac{\left(b - n_2\right) n_1 \gamma_f R_f}{w_f \left[\left(w_m + R_m\right) w_f + \left(b - n_2\right)\left(R_f + w_f\right) \right]} \\ &- \frac{\left(b - n_2\right) \delta_f R_f}{w_f \left[w_f \left(R_m + w_m + b - n_2\right) + \left(b - n_2\right) R_f \right]}\end{aligned}\right\}$$

$$\frac{\partial \overline{U}_f}{\partial w_f} = \frac{\beta_f w_f \left(R_m + w_m + b\right) - b\left(n_1 \gamma_f + \delta_f\right) R_f}{w_f \left[w_f \left(R_m + w_m + b\right) + b R_f \right]} > 0$$

when $\beta_f w_f \left(R_m + w_m + b\right) - b\left(n_1 \gamma_f + \delta_f\right) R_f > 0$

We know that the numerator of e_f^2 is a smaller number than this and positive, $\frac{\partial \overline{U}_f}{\partial w_f}$ is therefore >0.

Similarly husband's reaction to increasing wife's wage rate is:

$$\frac{\partial \overline{U}_m}{\partial w_f} = -\frac{\left(b - n_2\right) \gamma_f R_f \left[\delta_m^2 + w_m \left\{ \beta_m - \gamma_m \left(\beta_m + n_1 \gamma_m\right) \right\} \right]}{w_f^2 w_m \left(\gamma_f + \beta_f \gamma_m - \gamma_f \gamma_m + \delta_f \gamma_m + n_1 \gamma_f \gamma_m \right)} < 0 \qquad (3.34$$

$$\left.\begin{aligned}\frac{\partial \overline{U}_m}{\partial w_f} &= \left(\frac{\beta_m}{w_m e_m + R_m - y_m} \right) \frac{\partial \left(w_m e_m + R_m - y_m \right)}{\partial w_f} \\ &+ \left(\frac{\gamma_m n_1}{y_m + \left(b - n_2\right) e_f^1} \right) \frac{\partial \left(y_m + \left(b - n_2\right) e_f^1 \right)}{\partial w_f} + \frac{\delta_m}{\left(1 - e_m\right)} \frac{\partial \left(1 - e_m\right)}{\partial w_f}\end{aligned}\right\}$$

Since all terms are negative, $\frac{\partial \overline{U}_m}{\partial w_f}$ <0.

Proof: c) an increase in the household size will increase threat utility of husband and wife when the utility from one child outweighs the disutility from having an additional child and vice versa.

$$\frac{\partial \overline{U}_f}{\partial n_1} = \beta_f \frac{\partial \ln\left(w_f e_f^2 + R_f\right)}{\partial n_1} + \gamma_f \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) + \gamma_f n_1 \left[\frac{\partial \ln\left(y_m + \left(b - n_2\right)e_f^1\right)}{\partial n_1} - \frac{\partial \ln\left(n_1\right)}{\partial n_1}\right] + \delta_f \frac{\partial \ln\left(1 - e_f^1 - e_f^2\right)}{\partial n_1}$$

The term $\gamma_f \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right)$ in the above equation implies the utility from one unit of $n_1 > 0$. As all other terms are negative and represent the disutility from increasing the size of the household (including children). Therefore, $\frac{\partial U_f}{\partial n_1}$ >0 reflects when the utility from a unit of 'n_1' outweighs the disutility from adding an extra child and vice versa.

Further;

$$\frac{\partial \overline{U}_f}{\partial n_1} = \gamma_f \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) - \frac{\gamma_f \gamma_m \left(\beta_f + \delta_f + \gamma_f n_1\right)}{\left[\gamma_f + \gamma_m \left(\beta_f + \delta_f\right) + \gamma_f \gamma_m \left(n_1 - 1\right)\right]} \quad \text{(3.35}$$

$$\frac{\partial \overline{U}_f}{\partial n_1} > 0 \text{ when } \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) > \frac{1}{\left[1 + \frac{\gamma_f \left(1 - \gamma_m\right)}{\gamma_m \left(\beta_f + \delta_f + \gamma_f n_1\right)}\right]} \quad \text{(3.36}$$

$$\frac{\partial \overline{U}_f}{\partial n_1} < 0 \text{ when } \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) < \frac{1}{\left[1 + \frac{\gamma_f \left(1 - \gamma_m\right)}{\gamma_m \left(\beta_f + \delta_f + \gamma_f n_1\right)}\right]} \quad \text{(3.37}$$

$$\frac{\partial \overline{U}_f}{\partial n_1} = 0 \text{ when } \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) = \frac{1}{\left[1 + \frac{\gamma_f \left(1 - \gamma_m\right)}{\gamma_m \left(\beta_f + \delta_f + \gamma_f n_1\right)}\right]} \quad \text{(3.38}$$

Similarly,

$$\frac{\partial \overline{U}_m}{\partial n_1} = \beta_m \frac{\partial \ln\left(w_m e_m + R_m - y_m\right)}{\partial n_1} + \gamma_m \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) + \gamma_m n_1 \left[\frac{\partial \ln\left(y_m + \left(b - n_2\right)e_f^1\right)}{\partial n_1} - \frac{\partial \ln\left(n_1\right)}{\partial n_1}\right] + \delta_m \frac{\partial \ln\left(1 - e_m\right)}{\partial n_1} \quad \text{(3.39}$$

or

$$\frac{\partial \overline{U}_m}{\partial n_1} = \gamma_m \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) - \frac{\gamma_m}{1 + \frac{\gamma_m\left(1+\gamma_f\right)}{\gamma_f\left(\beta_m + \delta_m + n_1\gamma_m\right)}}$$

$$\frac{\partial \overline{U}_m}{\partial n_1} > 0 \text{ when } \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) > \frac{1}{1 + \frac{\gamma_m\left(1+\gamma_f\right)}{\gamma_f\left(\beta_m + \delta_m + n_1\gamma_m\right)}} \quad \text{(3.40}$$

$$\frac{\partial \overline{U}_m}{\partial n_1} < 0 \text{ when } \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) < \frac{1}{1 + \frac{\gamma_m\left(1+\gamma_f\right)}{\gamma_f\left(\beta_m + \delta_m + n_1\gamma_m\right)}} \quad \text{(3.41}$$

$$\frac{\partial \overline{U}_m}{\partial n_1} = 0 \text{ when } \ln\left(\frac{y_m + \left(b - n_2\right)e_f^1}{n_1}\right) = \frac{1}{1 + \frac{\gamma_m\left(1+\gamma_f\right)}{\gamma_f\left(\beta_m + \delta_m + n_1\gamma_m\right)}} \quad \text{(3.42}$$

This gives the same interpretation as we have observed in the above. Moreover, the above expression has an ambiguous sign, it is reasonable to assume that it will be positive as a negative sign would mean that the size of the public good is insignificant as the second term is less than 1. Assuming $\ln(z/n_1) \geq 1$, which is not unreasonable as it requires the joint contribution of husband and wife to public good to be non-negligible.

Given the increased earned income of a wife, it increases her private consumption thereby lowering the contribution towards household public good production. Consequently, the increased earned income of a wife increases her threat utility. However, this lowers the husband's private consumption and leisure thereby increasing his financial contribution in household public good production. As a result, the increased earned income of a wife decreases

her husband's threat utility. Further results depict that increasing the size of the household demands a greater input from the wife to contribute in the household public good production at the expense of working for an independent income. However, depending on her preferences, she may still be better off by having greater leisure time by not working outside of the household. Similarly, increasing the size of the household requires greater financial input from the husband to the production of household public good. Consequently the above effect decreases a husband's leisure and private consumption. Therefore, in the non-cooperative scenario, increasing the household size may lead to a lower contribution by the wife to the household public good production, yet increase her earned income by working for an independent income without decreasing her leisure. The time taken off from the household public good production is offset by spending more time earning an independent income. Conversely, greater time and financial input is required from the husband towards household good production by lowering his leisure. Therefore, in this particular context, a wife is better off and a husband is worse off hence the wife may have a greater threat utility over her husband. Therefore, in the following we present the proof of last part of the corollary.

Proof: d) an increase in the non-children household size (n_2) increase wife's threat utility when she has strongly negative preference for joint family system and decreases the husband's threat utility when his preference for joint family system is negative or not strongly positive.

From equation 3.4,

$$U_f = \beta_f \ln\left(\frac{w_f e_f^2 + R_f}{p_f}\right) + \gamma_f n_1 \ln\left(\frac{y_m + (b - n_2)e_f^1}{n_1}\right) + \psi_f \ln(b - n_2) + \delta_f \ln(1 - e_f^1 - e_f^2)$$

From the above equation 3.4 we may write as:

$$w_f e_f^2 + R_f = \frac{\beta_f \gamma_m \left[w_f (R_m + w_m + b - n_2) + (b - n_2) R_f \right]}{(b - n_2)\left[\gamma_f + \gamma_m (\beta_f + \delta_f) + \gamma_f \gamma_m (n_1 - 1) \right]}$$

and

$$y_m + (b - n_2)e_f^1 = \frac{n_1 \gamma_f \gamma_m \left[(w_m + R_m + b - n_2) + \frac{(b - n_2) R_f}{w_f} \right]}{\left[\gamma_f + \gamma_m (\beta_f + \delta_f) + \gamma_f \gamma_m (n_1 - 1) \right]}$$

also

$$1-e_f^1-e_f^2=\frac{\gamma_m\delta_f\left(b-n_2+R_m+w_m\right)+\left(b-n_2\right)\gamma_m\delta_f\dfrac{R_f}{w_f}}{\left(b-n_2\right)\left[\gamma_f+\gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_1-1\right)\right]}$$

therefore,

$$\left.\begin{aligned}\frac{\partial U_f}{\partial n_1}&=\left(\frac{\beta_f}{w_f e_f^2+R_f}\right)\frac{\partial\left(w_f e_f^2+R_f\right)}{\partial n_1}+\left(\frac{\gamma_f}{y_m+\left(b-n_2\right)e_f^1}\right)n_1\frac{\partial\left(y_m+\left(b-n_2\right)e_f^1\right)}{\partial n_1}\\&+\frac{\delta_f}{\left(1-e_f^1-e_f^2\right)}\frac{\partial\left(1-e_f^1-e_f^2\right)}{\partial n_1}-\frac{\psi_f}{\left(b-n_2\right)}\end{aligned}\right\} \quad (3.43$$

Further from the above equation 3.43,

$$\frac{\partial\left(w_f e_f^2+R_f\right)}{\partial n_2}=\frac{\beta_f\gamma_m w_f\left(R_m+w_m\right)}{\left(b-n_2\right)^2\left[\gamma_f+\gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_1-1\right)\right]}>0$$

similarly

$$\frac{\partial\left(y_m+\left(b-n_2\right)e_f^1\right)}{\partial n_2}=-\frac{n_1\gamma_f\gamma_m\left(w_f+R_f\right)}{w_f\left[\gamma_f+\gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_2-1\right)\right]}<0$$

$$\frac{\partial\left(1-e_f^1-e_f^2\right)}{\partial n_2}=\frac{\gamma_m\delta_f w_f\left(R_m+w_m\right)}{\left(b-n_2\right)^2 w_f\left[\gamma_f+\gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_1-1\right)\right]}>0$$

$$\left.\begin{aligned}\frac{\partial U_f}{\partial n_2}&=\left(\frac{\beta_f}{w_f e_f^2+R_f}\right)\left[\frac{\beta_f\gamma_m w_f\left(R_m+w_m\right)}{\left(b-n_2\right)^2\left[\gamma_f+\gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_2-1\right)\right]}\right]\\&-\left(\frac{n_1\gamma_f}{y_m+\left(b-n_2\right)e_f^1}\right)\left[\frac{n_1\gamma_f\gamma_m\left(w_f+R_f\right)}{w_f\left[\gamma_f+\gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_1-1\right)\right]}\right]\\&+\frac{\delta_f}{\left(1-e_f^1-e_f^2\right)}\left[\frac{\gamma_m\delta_f w_f\left(R_m+w_m\right)}{\left(b-n_2\right)^2 w_f\left[\gamma_f+\gamma_m\left(\beta_f+\delta_f\right)+\gamma_f\gamma_m\left(n_1-1\right)\right]}\right]\\&-\frac{\psi_f}{\left(b-n_2\right)}\end{aligned}\right\} \quad (3.44$$

$$\left.\begin{aligned}\frac{\partial U_f}{\partial n_2} = &\frac{\beta_f \gamma_m w_f \left(R_m + w_m\right)}{\gamma_m \left(b-n_2\right)\left[w_f\left(R_m + w_m + b - n_2\right) + \left(b-n_2\right)R_f\right]} \\ &- \frac{n_1 \gamma_f \gamma_m \left(w_f + R_f\right)}{\gamma_m \left[w_f\left(w_m + R_m + b - n_2\right) + \left(b-n_2\right)R_f\right]} \\ &+ \frac{\gamma_m \delta_f w_f \left(R_m + w_m\right)}{\left(b-n_2\right)\left[\gamma_m w_f\left(b - n_2 + R_m + w_m\right) + \left(b-n_2\right)\gamma_m R_f\right]} \\ &- \frac{\psi_f}{\left(b-n_2\right)}\end{aligned}\right\} \qquad (3.45$$

$$\frac{\partial U_f}{\partial n_2} = \frac{\left[\left(\beta_f + \delta_f\right)w_f\left(R_m + w_m\right) - \left(b-n_2\right)n\gamma_f\left(w_f + R_f\right)\right]}{\left(b-n_2\right)\left[w_f\left(R_m + w_m\right) + \left(b-n_2\right)\left(w_f + R_f\right)\right]} - \frac{\psi_f}{\left(b-n_2\right)}$$

$$= -\frac{\left[\left(\psi_f - \beta_f - \delta_f\right)w_f\left(R_m + w_m\right) + \left(\psi_f + n_1\gamma_f\right)\left(b-n_2\right)\left(w_f + R_f\right)\right]}{\left(b-n_2\right)\left[w_f\left(R_m + w_m\right) + \left(b-n_2\right)\left(w_f + R_f\right)\right]} \qquad (3.46$$

$$\left.\begin{aligned}\frac{\partial U_f}{\partial n_2} = &-\frac{\left[\left(1-\beta_f - \delta_f\right)w_f\left(R_m + w_m\right) + \left(\psi_f + n\gamma_f\right)\left(b-n_2\right)\left(w_f + R_f\right)\right]}{\left(b-n_2\right)\left[w_f\left(R_m + w_m\right) + \left(b-n_2\right)\left(w_f + R_f\right)\right]} \\ &+ \frac{\left(1-\psi_f\right)w_f\left(R_m + w_m\right)}{\left(b-n_2\right)\left[w_f\left(R_m + w_m\right) + \left(b-n_2\right)\left(w_f + R_f\right)\right]}\end{aligned}\right\} \qquad (3.47$$

As n_2 increases the contribution of wife to public good decreases, outside labour and leisure increases and so the threat utility increases given the woman's negative preferences to live in the joint family system which is common in the society under investigation. On the same token threat utility may decrease mainly because an increase in n_2 decreases the value of here contribution to the public good which also result in a psychological cost captured by ψ_f. In other words $\frac{\partial U_f}{\partial n_2}$<0 when ψ_f =1 (negative preference for joint family is strong), and may be positive when preference are weak. i.e. $\frac{\partial U_f}{\partial n_2}$>0 when

$$\psi_f < \frac{\left(\beta_f + \delta_f\right)w_f\left(R_m + w_m\right) - n\gamma_f\left(b-n_2\right)\left(w_f + R_f\right)}{\left[w_f\left(R_m + w_m\right) - \left(b-n_2\right)\left(w_f + R_f\right)\right]}$$

Analogously,

$$U_m = \beta_m \ln\left(\frac{w_m e_m + R_m - y_m}{p_m}\right) + \gamma_m n_1 \ln\left(\frac{y_m + be_f^1}{n}\right) + \psi_m \ln(n_2) + \delta_m \ln(1-e_m)$$

$$\left.\begin{aligned}\frac{\partial U_m}{\partial n_2} = &\left(\frac{\beta_m}{w_m e_m + R_m - y_m}\right)\frac{\partial(w_m e_m + R_m - y_m)}{\partial n_2} + \frac{\gamma_m n_1}{y_m + (b-n_2)e_f^1}\frac{\partial(y_m + be_f^1)}{\partial n_2} \\ &+ \frac{\psi_m}{n_2} + \left(\frac{\delta_m}{1-e_m}\right)\frac{\partial(1-e_m)}{\partial n_2}\end{aligned}\right\} \quad (3.48$$

$$w_m e_m - y_m + R_m = \frac{\gamma_f\left[\beta_m(w_m + b - n_2) + (1-\delta_m+\gamma_m)R_m + \frac{(b-n_2)\beta_m R_f}{w_f}\right]}{\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1-1)\right]}$$

$$\frac{\partial(w_m e_m + R_m - y_m)}{\partial n_2} = -\frac{\gamma_f \beta_m (w_f + R_f)}{w_f\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1-1)\right]} < 0$$

$$y_m + (b-n_2)e_f^1 = \frac{n_1\gamma_f\gamma_m\left[(w_m + R_m + b - n_2) + \frac{(b-n_2)R_f}{w_f}\right]}{\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1-1)\right]}$$

$$\frac{\partial\left[y_m + (b-n_2)e_f^1\right]}{\partial n_2} = -\frac{n_1\gamma_f\gamma_m(w_f + R_f)}{w_f\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1-1)\right]} < 0$$

$$(1-e_m) = \frac{\delta_m\gamma_f\left[w_m + (b - n_2 + R_m) + (b-n_2)\frac{R_f}{w_f}\right]}{w_m\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1-1)\right]}$$

$$\frac{\partial(1-e_m)}{\partial n_2} = -\frac{\delta_m\gamma_f(w_f + R_f)}{w_f w_m\left[\gamma_f + \gamma_m(\beta_f + \delta_f) + \gamma_f\gamma_m(n_1-1)\right]} < 0$$

Since all terms on the right hand side of $\frac{\partial U_m}{\partial n_2} < 0$ are negative except $\frac{\psi_m}{n_2}$, the husband threat utility is decreasing in non-children household size unless the husband has strong positive preference for joint family system. The husband utility is therefore decreasing in n_2 when his preference for joint family system is negative or positive but weak.

It is essential to note that all four propositions in the corresponding corollary depend on the assumption of separate spheres as expressed in Anderson and Eswaran (2009). This assumption emphasises the conventional role of a husband and wife consistent with the

experience of most developing countries and Pakistan in particular. This implies that in these societies women are more likely to be observed working in the home whilst men contribute financially by working in the labour market outside of the home.

Furthermore, the motivation drawn from the above bargaining model is maintained and some propositions in line with the corollary on the effects of unearned, earned and household size on women's autonomy in different aspects of the household decision-making process are tested empirically. The empirical exercise may provide further explanation as to why increasing the unearned income of a wife may increase her time input to produce more household public good and leisure, thereby increasing her threat utility in both conflictual and cooperative scenarios. Conversely, increasing the earned income of a wife requires sacrificing some leisure which also increases her threat utility as argued in the above. Qualitatively, earned income may have a strong effect on the corresponding threat utility as it increases a wife's private consumption whilst decreasing her husband's. If either type of income is normalised, equal amounts of utility are expected. Therefore, the bargaining set-up does not provide a clear cut answer to the question; which type of income increases the threat utility of women? A detailed explanation is included in the empirical analysis of Chapter 7.

Similarly, regarding household size, the above simple bargaining model does not clearly define which component increases a women's threat utility. For instance, the theoretical model provides a general impression of multiple impacts on the spouses' utilities, which refer to the ambiguous effects of household size on a partner's utility. This is because preferences of different components of the household vary between spouses depending on the conflictual scenario. Conventionally, it is likely that a woman may experience greater satisfaction from increasing the overall size of the household, not by increasing the number of her husband's relatives, but by having more children. However, in some situations, other members of the household may also be more useful and contribute in terms of financial assistance or time allocation in the household public good production. Extensive analysis of these aspects is found in the empirical analysis in Chapter 7.

Given the above propositions and corollary, consideration is given to the fall-back position within marriage, as opposed to divorce, proposed by Woolley (1988), Lundberg and Pollak (1993), and Chen and Woolley (2001). However, if the fall-back position is replaced by divorce, a wife's threat utility remains higher relative to her partner's, subject to increasing earned or unearned income and the constant of the partner's in the bargaining model. Consequently, this explanation does not suggest which route would provide more autonomy to women. In the divorce option, unearned income may provide a greater threat utility compared with earned income. However, the comparative statics clearly reflect that it is the wife's earned income that records a higher threat utility, also confirmed in above comparative analysis. The

following discussion is concerned with basic empirical relevancy consistent with the above theoretical model which identifies women's autonomy in non-cooperative situations.

3.3. Empirical Settings

Pakistan Social and Living Standards Measurement Survey (PSLM) data is used to investigate the above propositions and corollary and address other aspects of the theoretical model. It is relevant to note that the above data set, like many other existing data sets, does not capture the non-cooperative behaviour of respondents in the household. Presumably, where there is less likelihood of asymmetric information between a husband and wife, a cooperative outcome can be assumed. Moreover, it is assumed the non-cooperative outcome is the fall-back position that hinges on the cooperative outcome. Another level of difficulty which is also mentioned in Pollak (2005) is to identify which ingredient of the threat utility may be exercised by the wife in the non-cooperative situation. Therefore, this issue requires some assumptions to be made regarding the observed activities of a wife and husband in the cooperation outcome, in the event when cooperation breaks down. Potential threat options are identified and analysed with the help of data pertaining to the cooperative situation.

The issue is addressed by considering the employed status of a wife constant in the situation of breakdown of the cooperation. This also establishes the fact that the wife who is employed has the skills to earn an independent income by working outside the household, yet remains within the structure of a marriage. Further, given the strong urban and rural regional divide, the above explanation appears relevant to both regions. For instance, corresponding to rural region a wife working as homestead may resume working on the neighbouring farms in event of bargaining breaks down with her husband. The other relevant aspect is family composition including the size of the household, gender of children, the presence of elderly family members and other relatives of the husband living in the same house. Children may provide extra utility to their mothers as a credible source of bargaining in the event of cooperation. This argument is equally valid in the event of non-cooperation if bargaining breaks down. This is due to the continuing financial responsibility of the husband towards the children in the event of divorce. Therefore, it is plausible to assume that family composition in terms of an increasing household remains a valid threat option of the wife in a non-cooperation situation between spouses.

Finally the discussion shows that both a woman's employment status and her family composition may provide credible threat options in both cooperative and non-cooperative situations, analysed by using the given data set. The following section presents empirical conjectures derived from this theoretical model and further conjectures that are analysed empirically in the coming Chapters.

3.4. Empirical Conjectures

Empirical conjecture 1**:** *Employed women (those in paid employment) show greater levels of autonomy compared with unemployed women (with unearned income).*

In general the above conjecture may be similar to Anderson and Eswaran's (2009) investigation into rural Bangladesh which concluded that earned income was a valid threat utility which increased women's autonomy in the household. However, this study differs from the above investigation in two distinct ways. This study delves deeper and investigates the above conjecture from a general perspective as well as a more detailed look at urban and rural Pakistan. The analysis is further replicated for various dimensions and sub-dimensions of women's autonomy measured on three levels; '*no autonomy*', '*partial autonomy*' and '*strong autonomy*'. Direct measures of women's autonomy are used, unlike most of the existing literature on the subject.

Empirical Conjecture 2**:** This conjecture proposes a link between household composition and women's autonomy. This study classifies household size into two main components, ***a)*** consisting of elderly persons and relatives of the husband and ***b)*** number of children. The following is tested: ***i)*** how the size of a household plays a role in determining women's autonomy; ***ii)*** whether the household size (excluding children) may lower women's autonomy; and ***iii)*** whether the presence of children increases the threat utility of women thereby increasing their autonomy in the household. The following two queries within each of these parameters are also considered.

i) *How the size of a household plays a role in determining women's autonomy.*

ii) *How elderly persons, including a husband's relatives, tend to limit women's autonomy.*

The above aspects of family composition further motivate the investigation of the role of family formation on women's autonomy. Two possible outcomes facing a woman after marriage are considered. Firstly, whether she finds herself in a nuclear or extended family formation where her husband's relatives also reside in the same household. In general, it is expected women from extended families will have less autonomy than women from a nuclear family system. Dixon-Mueller (1989) observes that the extended family lifestyle affords a greater chance of control over women by others, especially control of new brides and young women who are at the bottom of the gender and age hierarchy. By contrast, in a nuclear family the decision-making is much more likely to rest in the hands of the male head, and the next in line is much more likely to be his wife. It is hypothesized that women from extended families are less likely to be autonomous as compared with women from nuclear family systems.

Furthermore, even if women are not living in extended families, the intergenerational obligations often imply that aging parents live with their married children. Dyson and Moore

(1983) observe that patriarchal kinship structures emphasize the intergenerational responsibilities of males to their natal kin rather than those of females. It is also commonly observed that a husband's parents are more likely than the woman's kin to reside with the conjugal couple. In other words, patriarchal traditions are more likely to be enforced in households which contain a woman's in-laws.

The upshot of the above discussion and available data readily allows the following sub-conjectures to be investigated.

ii-a) *The joint family set up lowers a woman's autonomy in the household.*

ii-b) *The presence of a woman's in-laws may also depreciate her autonomy.*

Regarding other components of the household size such as the presence of children, the following conjecture is empirically investigated.

iii) *A greater number of children in a household may increase a woman's autonomy at the household level.*

A number of studies have shown that boys in particular increase women's autonomy according to the given cultural norms of developing countries. This belief is re-examined in depth by investigating the relationship between the number of children and their gender, to women's autonomy. The relative number of boys to girls and vice versa is also investigated.

iii-a) *single child of either sex (boy/girl)*

iii-b) *only boys but no girl and vice versa*

iii-c) *equal amount of children (boys and girls)*

iii-d) *boys greater in number than girls and vice versa*

A wide variety of control variables are utilised while testing the above conjectures. These variables include individual characteristics of women and their male spouses, such as demographics, level of education and income. Family socio-economic conditions are included, if associated with autonomy, making the distinction between poor, middle and rich family backgrounds. Regional traits such as provinces/states are included; four provinces (states) dummies are utilised to observe if geographical location has any significance in explaining variations in women's autonomy.

3.5. Concluding Remarks

This Chapter presents a theoretical framework of analysis identifying the appropriate channels through which women's autonomy evolves in household decision-making settings. Correspondingly the earned income status of women, as also pointed out in other relevant studies, has been proven as a credible threat option that increases women's autonomy. Further the above framework of analysis identifies another threat option which has been ignored in the literature; the relevancy of household size to women's autonomy. This threat option carries two main dimensions related to household composition. The first includes whether elderly persons and relatives of the husband live in the same household, the second dimension relates to the size of the household, specifically in terms of the number of children. Where the overall household size increases in terms of elderly persons and a husband's relatives, a woman's autonomy may decrease, however, where the overall household size increases due to the number of children, her autonomy may increase. Consistent with predictions of the theoretical model of analysis, the relevance of these threat options is demonstrated in the basic simulations exercise.

Additionally, other relevant determinants, including individual characteristics, spousal education and income level, family socioeconomic status, different family formations and geographic locations, are also considered in the model of women's autonomy. Finally, this Chapter provides empirical conjectures corresponding to the threat options and other relevant determinants for further empirical analysis in Chapter 7.

CHAPTER 4

DATA DISCUSSION AND CONSTRUCTION OF VARIABLES

4.1. Introduction

Researchers have frequently echoed the importance of adequate data information on interdisciplinary research issues. For this reason, we accurately measure relevant data on a wide range of variables to investigate the empirical conjectures developed in Chapter 3. These variables include social and living standards, urban and rural regions of Pakistan, different measures of married women's autonomy, employment status, individual demographic information, a partner's characteristics, size of the household including children and other family background information of women from different states of the country. We believe that the data widely known as 'Pakistan Social and Living Standards Measurement Survey' (PSLM) provides sufficient information on all aspects of analysis highlighted in Chapter 3.

This chapter is divided into two distinct sections; the first corresponds to sources and characteristics of data, the second refers to the construction of relevant variables for empirical analysis.

4.2. Data Characteristics

We use data from the PSLM 2005-06 in this thesis. The PSLM is comprised of a series of cross-sectional surveys approved in 2004 for the period of July 2004 to December 2009.[1] This extensive information was gathered through district-level and national/provincial-level surveys conducted in alternate years. The first round of PSLM was conducted in 2004-05 in which data on social indicators was collected from 77,000 households at a district level. The second round of survey series conducted in 2005-06 included the detailed income/expenditure module. This survey aimed

[1] Discussion closely follows from survey reports and Khan and Awan (2011).

to provide detailed outcome indicators on education, health, population welfare, water and sanitation and income and expenditure. It was of great importance because it provided policy makers with information that has guided the development of national objectives. Consequently, it pertains to one of the main mechanisms for monitoring the implementation of the poverty reduction strategy and medium term development framework in the country. Further it provides a set of representative, population-based estimates of social indicators and their progress under the Poverty Reduction Strategy Paper (2010). We utilise second round survey data (PSLM 2005-06) in this study to analyse the determinants of women's autonomy in Pakistan. The survey includes interviews of 15,453 households corresponding to almost all of the socio-economic issues through a two-stage stratified sample design.[2]

It is important to note, this survey represents the total population including urban, rural and other specialised areas of the country. Table 4.1 presents the number of enumeration blocks and villages in urban and rural regions. All urban areas comprising of cities and towns have been divided into small compact areas known as enumeration blocks (of which there are 26,698), identifiable through a geographical map. Each enumeration block comprises of around 200 to 250 households and is further categorised into low, middle and high-income group, keeping in mind the socio-economic status of the majority of households within each block. The rural areas consist of around 50,588 villages, gathered from the sampling frame of the 1998 population census which lists all villages (mouzas/dehs).

The larger cities with a population 0.5 million and above have been treated as an independent stratum. Each of these cities has been further sub-stratified into low, middle and high income groups. The remaining cities/towns within each defunct administrative division have been grouped together to constitute an independent stratum. The entire rural domain of the districts of Punjab, Sindh and NWFP (North-West Frontier Province)[3] provinces has been considered as independent stratum, whereas in Balochistan province, the defunct administrative division has been treated as stratum.

[2] However, the survey does have some limitations. The questions asked in the survey are sometimes unclear to the respondents, for example, the question 'Who in your household decides whether you should have more children?' By including the word 'more', the question does not identify women with children, from those who do not. Similarly, codes for questions about decisions regarding purchases and consumption of certain items were very ambiguous (too many categories and some overlaps between categories), which may have caused a bias in answers. Furthermore, we have no information in this survey about the dowry which is a significant feature of women's autonomy in Pakistan.

[3] NWFP is recently renamed as Khyber Pakhtunkhwa.

Table 4.1: Number of Enumeration Blocks and Villages as per Sampling Frame

Province	Number of Enumeration Blocks	Number of Villages
Punjab	14,549	25,875
Sindh	9,025	5,871
NWFP	1,913	7,337
Balochistan	613	6,557
A.J.K	210	1,654
Northern Area	64	566
FATA		2,596
Islamabad	324	132
Total	**26,698**	**50,588**

Sources: Extracted from PSLM (2005-06)

A two-stage stratified sample design has been adopted for this survey. Table 4.2 describes the distribution plan of primary sampling units (PSUs) and secondary sampling units (SSUs). The purpose of this classification is to capture the variability in the entire population from all regions, including both urban and rural. A sample size of 15,453 households gathered from 1109 sample PSUs (consisting of 531 from urban and 578 from rural areas) may be considered sufficient to produce reliable estimates across all provinces.

Table 4.2: Profile of the Sample

Provinces	URBAN	RURAL	TOTAL
Primary Sampling Units			
Punjab	240	244	484
Sindh	140	132	272
NWFP	88	119	207
Balochistan	63	83	146
Overall	**531**	**578**	**1109**
Secondary Sampling Units/Households			
Punjab	2790	3892	6682
Sindh	1666	2107	3773
NWFP	1049	1901	2950
Balochistan	735	1313	2048
Overall	**6240**	**9214**	**15453**

Sources: Extracted from PSLM (2005-06)

***Selection of Primary Sampling Units (PSUs)*:** Enumeration blocks in the urban domain and mouzas/dehs/villages in the rural domain have been taken as primary sampling units (PSUs). In the urban domain, sample PSUs from each stratum have been selected by the probability proportional to size (PPS) method of sampling, using households in each block as a measure of size (MOS).

Similarly in rural areas, the population of each village has been used to determine MOS for a selection of sample villages using the PPS method of selection.

***Selection of Secondary Sampling Units (SSUs)*:** Households within each sample PSU have been considered as SSUs. From each sample village and enumeration block, 16 and 12 households respectively have been selected by a systematic sampling scheme with a random start.

The main focus of this study is to investigate the determinants of women's empowerment. For purposes of analysis, data from the section on women and decision-making was merged with basic demographic, education and employment information. There were 25,651 women aged 15-49, although 1047 women were not present at home at the time of interview therefore; they are excluded from analysis. The main analysis has been restricted to currently married women, which reduces the data further to 15,506 women in total.

We now discuss construction of the variables, including measures of autonomy, threat utilities and other control variables used in the empirical analysis.

4.3. Construction of Variables

This section presents a discussion on the measures of women's autonomy in two key dimensions; economic and family planning. Further we describe a wide set of other variables known as the determinants of autonomy, including some key control variables.

4.3.1. Measures of Women's Autonomy

Economic Decision-Making Index (EDI):

The EDI refers to women's choices and decisions when selecting and purchasing essential household goods, not only for themselves, but also for children and other family members living in the same house. Consequently, it measures the relative degree of autonomy of women at the household level. The EDI comprises four main components which a household may typically show in their consumption basket. They are: regular food items; clothing and footwear; medical treatment and recreation and travelling.

The PSLM survey recorded the direct responses[4] of women on a scale of '1' to '7', consistent with the cultural hierarchy in decision-making regarding each of the above four

[4] The questionnaire gave women the following decision-making options; 1 = woman herself (if a woman makes independent decisions), 2 = head/father of the household decides alone, 3 = head/father in consultation with his/her spouse, 4 = head/father in consultation with the woman concerned, 5 = head/father and spouse of

components of EDI. For simplicity and useful analysis, the seven options have been merged and recoded into three categories; now known as '0', '1' and '2', respectively known as '*no autonomy*', '*partial autonomy*' and '*strong autonomy*'. The '*no autonomy*' refers to zero involvement of women in making independent choices, '*partial autonomy*' implies at least some part in the decision-making process, and '*strong autonomy*' corresponds to absolute independence in the decision making process. The four main components of EDI can then be assessed for the level of independence in women's household decision-making against the three recoded categories above.

In the next step, those four indices are collated into a single aggregate index called the economic decision- making index. This gives us a wide-ranging index with a minimum value of '0' ('*no autonomy*') and a maximum value of '8' ('*strong autonomy*'). However, this wider range may reveal some complexities when interpreting the results. To avoid this, the index is further merged and recoded into four appropriate categories ranging from a minimum of '0' ('*no autonomy*') to a maximum of '4' ('*strong autonomy*'). For example, if a respondent selects no autonomy in all dimensions, or partial autonomy in one out of four dimensions, her response is coded as '0' and called '*no autonomy*'. Similarly if a respondent records a mixed combination of autonomy in four different dimensions, for instance falling in the range of '2' to '3', then '4', and '5' to '7' we recode it as '1' (*minor autonomy*), then '2' (*mid autonomy*), and '3' (*more autonomy*) respectively. Likewise, if the respondent shows full autonomy in all of the four dimensions, recoding it as '8', her response has been recoded as the maximum of '4' and called '*strong autonomy*'. Finally, we collapse the five scale index into three categories of autonomy for the purposes of simplicity and consistency of analysis. The collapse is carried out as follows: the three varieties of autonomy ('minor', 'mid' and 'more') are merged into one category called '*partial autonomy*' and the rest of the labels remain unchanged. This final index of economic decision-making autonomy ranges from the minimum of '0' ('*no autonomy*') to a maximum of '2' ('*strong autonomy*').

Family Planning Decision Making Index (FDI):

The FDI consists of two types of decision-making spheres in a family; the use of birth control measures and the decision to have more children. In this section we gauge women's autonomy by focusing on the recorded responses of women to these decision-making spheres. The questionnaire provides women respondents with '7' response options[5] regarding the use of birth control measures,

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the head in consultation with the woman concerned, 6 = head/father and other male members decide, 7 = other combinations of persons decide.

[5] These include; 1 = the husband alone, 2 = the woman herself, 3 = husband and woman jointly, 4 = mother of the woman or husband, 5 = nobody, 6 = menopausal/infertile, 7 = other.

and ‘8’ regarding the decision to have more children. The ‘8’th option hinges on the belief that it is ‘*in the hands of God*’.

It is relevant to note that women who responded as ‘*menopausal/infertile*’ are dropped from the calculations, reducing the data to 15,302 observations. Similar to the EDI, we recode responses of the two FDI components to construct an index for efficient analysis. Initially the women’s responses regarding these decision-making spheres are coded into three categories, ‘0’, ‘1’ and ‘2’. These codes correspondingly referred to ‘*no autonomy*’, ‘*partial autonomy*’ and ‘*strong autonomy*’ in the decision-making process. The ‘*no autonomy*’ implies an absence of a say in decision-making with the decision possibly resting completely on the male partner or the mother-in-law. The ‘*partial autonomy*’ refers to some say in decision-making, such as a joint decision in consultation with other concerned family members. It may appear absurd that the mother-in-law is included in the decision-making process but it is a frequently observed practice in developing societies. The third category of autonomy is ‘*strong autonomy*’ in which a woman makes the choice or decision independently.

Both the above components of FDI combine to arrive at a single aggregate index of family planning decision-making autonomy. This index varies from the minimum scale of ‘0’ (‘*no autonomy*’) to the maximum of ‘4’ (‘*strong autonomy*’). Along similar lines to the EDI, we reorganise the coding scheme to achieve four instead of five categories of family planning autonomy. Therefore we collapse ‘0’ and ‘1’ into ‘0’ (*no autonomy*) with the remaining categories left unchanged. Furthermore, to make this index consistent with the EDI, we merge the two middle categories into a recoded category of ‘1’ (‘*partial autonomy*’). As a result of this reorganization, the FPI becomes identical to the EDI, both measured on a scale of three levels with replicated meanings.

In the following section, we discuss the construction of potential determinants and other control variables included in the empirical analysis.

4.3.2. The Determinants

The theoretical framework as discussed in Chapter 3 identifies threat utilities as the main determinants of women’s autonomy in the context of Pakistan. These threat utilities include the employed status (earned income) and size of the household. In addition to women’s threat utilities, variables emphasised in the existing literature are also included as common determinants of women’s autonomy. These common determinants largely play the role of control variables in this thesis. Typically these variables include the individual characteristics of women’s partners, characteristics of the women’s family and some geographical divisions which may be relevant to consider in the empirical analysis. We discuss these determinants in detail.

Threat Options/Utilities

A priori threat utilities (earned income and size of household) as defined above are prime determinants of women's autonomy. Earned income means women who hold paid employment. PSLM data allows us to segregate women in paid employment from unpaid employment. Women who are self-employed, in independent businesses or associated with the private/public sector are classified as employed hence earning an independent source of income. Conversely women who are housewives, working at family farms or associated with a family business and are not paid for their services, are classified as unemployed. We construct a binary variable of employment status and code this as '1' for employed and '0' as unemployed for empirical analysis.

As described in the previous Chapter, the size of the household has three dimensions. The first dimension includes all members of the household without distinguishing among children, elderly persons and relatives of the husband living in the same household. This is conventional in most developing countries and particularly in Pakistan where an unusually large household size is related to extended family systems. We construct this household size variable as, '*below average'* (coded as '0'), '*average*' (coded as '1') and '*above average*' (coded as '2') measured as the most frequent value of data (Mode). The second dimension of the household size corresponds to any elderly persons and relatives of the husband. It is constructed along similar lines to the household size variable. The third dimension refers to the number of children in a household and is constructed slightly differently depending on the corresponding enquiry of research. The variable of number of children is classified by the child's gender, coded as follows; '0' (no boy), '1' (one boy) and '2' (two or more boys), and similarly for girls. It is also relevant to note that we further construct dummy variables of different combinations of boys and girls to test extra conjectures devised in the previous Chapter 3.

Household Composition/Family Structure

Relevant to the household size variable we also include two different forms of family structure as determinants of women's autonomy. These are the nuclear and extended family systems which are prevalent in Pakistan. We define the nuclear family or elementary family as a family group consisting of a husband, wife and their children. Similarly, the extended family or the joint family group is defined as including the extended nuclear family, consisting of grandparents, children, uncles, aunts and close relatives.

PSLM data does not distinguish explicitly between these two types of family groups in the questionnaire. However, we construct this measure by classifying women according to these two family groups based on the above corresponding definitions of family types. This variable also

takes a binary formulation where '0' refers to women from a nuclear family structure, and '1' refers to those in an extended family group. Further, we also observe the presence of the mother-in-law as another variable which may influence women's autonomy.

Individual Characteristics

Individual characteristics mainly include the level of education and age of women in this analysis. In Pakistan, we observe a greater proportion of women are illiterate or have never attended school, either before or after their marriage. Furthermore, we find women's education profile varies between the rural and urban regions of Pakistan. PSLM data presents detailed information on the educational profile of respondents. Consistent with the prevailing education system, we categorise this variable into five levels of educational achievement. These are; '*no education*'(never attended school), '*5-7 years education*', '*8-9 years education*', '*10-12 years education*' and '*higher education*' (over 12 years), coded as '0', '1', '2', '3' and '4' respectively. The age of women respondents in the survey ranges from the minimum of 15 years to the maximum of 49 years. We divide this range into seven different categories with a gap of five years in each of the successive categories, coded from '0' to '7' respectively.

Partner Profile

The marriage market in Pakistan is relatively complex and involves several considerations in order to find an appropriate match. In general, we classify the marriage market into two categories, depending on the degree of involvement of other family members. These are commonly known as arranged marriages and by choice marriages. It is important to note that these marriages may occur within or out of the kinship domain.

Arranged marriages, according to the norms of society, are naturally organised by the parents with the consent of the adult children being married. However parents' opinions are final and may dominate the preferences of adults. In the arranged marriage system there exists the concept of exchange marriages frequently observed among conservative and tribal/rural family groups. This is formally known as Watta Satta (literally 'give-take') traditions. The fundamental consideration in these marriages is the public profile of the two families joining together through this relationship. The adult children's characteristics are also considered in most cases. Unlike an arranged marriage, the marriage by choice may not necessarily occur within kinship lines. There is a greater chance that parents may not allow their adult children to make independent choices in selecting their marriage partners. Regardless of the above two structural marriage arrangements, the partner's profile is an important consideration in that society. The educational level and income are

the most important elements of their profile. Therefore, we consider both of these elements in our analysis.

With regard to the educational level variable of partners, we construct a classification along identical lines to that developed for women's educational assessment. Likewise, the income level of the partner is classified into '*low income'*, *'middle income'* and *'high income'* brackets. This classification is based on the standard definition of income groups from the PSLM data.

Family Financial Status

Indeed, Pakistan, like many other developing countries exhibits different classes of society based on their financial status. It is usually observed that women from affluent family groups show greater autonomy compared with women from a relatively lower financial status. Therefore, we classify women's family groups into '*low income*', '*middle income'* and '*high income'*. This classification is derived from the information given on household income in the PSLM survey. PSLM reports household income/consumption in quintiles for regions and corresponding states. PSLM groups the households with the lowest per capita consumption into the 1st quintile, those with a higher per capita consumption into the 2nd quintile, and so on. In the first instance, quintiles were derived separately for each of the eight major regions of interest (urban and rural regions within four provinces). There are three important points to be considered regarding the construction of quintiles. First, quintiles are labelled in such a way that households with the lowest per capita consumption appear in the 1st quintile and those with the highest consumption appear in the 5th quintile. Second, as these quintiles were derived separately for each of the eight regions, they may not be consistent and comparable across domains – for example households in the 2nd quintile of urban Punjab may show a different cut-off of income level compared with the same quintile of another province or state. Finally, quintiles were calculated by taking sampling weights into account to yield an equal number of individuals (not households) in all quintiles in each domain. We derive other quintiles by adopting the same procedure. In the final stage, we merged the first two quintiles as '*low income*' group households and middle two quintiles as '*middle income*' group and the 5th quintile as the '*high income*' group households.

Provinces/States and Regional Fixed Effects

There are four main states also called provinces of Pakistan. We observe strong variations in culture, geography, language, living standards and economic well-being and other factors across all states. Therefore, we take account of these variations to observe their impact on women's autonomy. Further, there exists an obvious division between the urban and rural settings of Pakistan

which has led to various changes in the lives of people from these regions. For instance it is generally believed that urban life is relatively fast-paced and provides ample opportunities to participate in the labour market, while rural regions provide limited opportunities. The basic differences between urban and rural life makes it essential to produce an empirical analysis of women's autonomy for separate across rural-urban location.

4.4. Concluding Remarks

This Chapter has presented discussion of the data and the construction of variables required for further empirical analysis. The characteristics of data including the methodology, sample size and relevancy have been discussed in detail, as well as the measures and determinants of women's autonomy. The measures of autonomy are classified into economic decision-making and family planning within the household. Extended discussion has been provided on the nature and construction of these indices of autonomy including aggregated economic decision-making and aggregated family planning decision-making. Additionally, the indicators of sub-dimensions of autonomy are also pointed out. Furthermore, this Chapter provides a definition and construction of the determinants of autonomy, including employment status, individual demographic information, partner's characteristics, size of the household including children, further family background information of women and geographical location.

CHAPTER 5

EMPIRICAL SETTINGS AND METHODS OF ESTIMATION

5.1. Introduction

There are a few alternative methods of estimation adopted by applied researchers in the field of social sciences. The use of *Ordinary Least Squares* (OLS) and *Cumulative Approach Probability Models* (Logit/multi-category Logit models) is commonly used where the variable of interest is categorical in nature. However, Park (2009) demonstrates that when a dependent variable is categorical, the OLS method can no longer produce the best linear unbiased estimator (BLUE); that is, OLS is biased and inefficient. Similarly, *Cumulative Approach Probability Models* may also give biased and misleading results if the proportionality assumption is relaxed and adjacent categories are ignored in the categorical dependent variable. Therefore, we cautiously devise an appropriate strategy of estimation in this thesis. We begin with the most frequently utilised technique on similar research topics, the Cumulative Approach (proportional odds model) Probability Models. We evaluate this approach on the common grounds of testing the proportionality assumption and the probability of interest depending on the construct of a categorical dependent variable. Finally, we adopt the Adjacent Approach by relaxing the proportionality assumption within the multinomial context of women's autonomy. To the best of our knowledge, such a rigorous methodology has not previously been used in an empirical analysis on women's autonomy.

This chapter presents a discussion on empirical settings and methods of estimation consistent with the theoretical framework of analysis and the nature of variables respectively described in Chapters 3 and 4. The Chapter is divided into two sections. Section 5.2 discusses empirical settings by identifying the empirical equations of multi-dimensional women's autonomy. Section 5.3 presents a discussion on the methods of estimation adopted in this thesis.

5.2. Empirical Settings

The following discussion specifies econometric models of women's autonomy in economic decision-making and family planning decision-making in an overall context, as well as in urban and rural regions respectively.

Economic Decision-Making Autonomy:

The aggregate index of economic decision-making (EDI) consists of four components (sub-dimensions) as noted in Chapter 4. We identify five different econometric models to estimate the effects of different determinants of EDI and corresponding sub-dimensions of economic decision-making autonomy. Therefore the empirical equation can be written as:

$$EDI_i = \sum_{j=1}^{2} \alpha_{ij} T_{ij} + \sum_{k=1}^{9} \beta_{ik} X_{ik} + u_i \qquad (5.1$$

where '*EDI'* denotes the aggregated index of women's autonomy regarding the economic decision-making aspect, *'T'* refers to the vector of threat utilities identified as the earned income of women and household size and '*X*' shows a vector of other determinants (control variables). The control variables are education level and age structure of women, educational level and income of the partner, family financial health and province and state variables. The conventionally understood error term is '*u'*. Parameters associated with *'T'* and *'X'* show the marginal effects or measures odds ratios ($'\alpha'$ and $'\beta'$) associated with threat utility and control variables respectively. The subscript '*i*' shows estimates for aggregate, urban and rural results, '*j*' and '*k'* refer to the number of variables included in the vector of threat utilities and control variables respectively.

Similarly, we define empirical equations for the corresponding sub-dimensions of women's autonomy in the economic decision-making aspect as follows.

$$EDI_{(F)i} = \sum_{j=1}^{2} \alpha_{ij} T_{ij} + \sum_{k=1}^{9} \beta_{ik} X_{ik} + u_i \qquad (5.2$$

$$EDI_{(C)i} = \sum_{j=1}^{2} \alpha_{ij} T_{ij} + \sum_{k=1}^{9} \beta_{ik} X_{ik} + u_i \qquad (5.3$$

$$EDI_{(M)i} = \sum_{j=1}^{2} \alpha_{ij} T_{ij} + \sum_{k=1}^{9} \beta_{ik} X_{ik} + u_i \qquad (5.4$$

$$EDI_{(R)i} = \sum_{j=1}^{2} \alpha_{ij} T_{ij} + \sum_{k=1}^{9} \beta_{ik} X_{ik} + u_i \quad (5.5$$

$EDI_{(F)}, EDI_{(C)}, EDI_{(M)}$ *and* $EDI_{(R)}$ represent decision-making in food, clothing and footwear, medical and recreational related decisions at the household level. All other notations have the same meanings as explained previously.

Family Planning Decision-Making Autonomy:

Similar to economic decision-making, we define empirical equations of family planning decision-making along with the sub-dimensions of autonomy as follows. It is relevant to note that the determinants remain unchanged in family planning decision-making autonomy as observed in economic decision-making.

$$FDI_i = \sum_{j=1}^{2} \alpha_{ij} T_{ij} + \sum_{k=1}^{9} \beta_{ik} X_{ik} + u_i \quad (5.6$$

Therefore, '*FDI'* represents the aggregate index of family planning decision-making and the rest of the notations, variables and subscripts carry the same meanings as described previously.

Similarly, we define empirical equations for the corresponding sub-dimensions of family planning decision-making autonomy as follows.

$$FDI_{(MC)i} = \sum_{j=1}^{2} \alpha_{ij} T_{ij} + \sum_{k=1}^{9} \beta_{ik} X_{ik} + u_i \quad (5.7$$

$$FDI_{(BC)i} = \sum_{j=1}^{2} \alpha_{ij} T_{ij} + \sum_{k=1}^{9} \beta_{ik} X_{ik} + u_i \quad (5.8$$

$FDI_{(MC)}$, *and* $FDI_{(BC)}$ represent having more children and birth control related decisions-making women autonomy of family planning. The remaining notations, variables and subscripts carry the same meanings as defined above.

5.3. Methods of Estimation

The appropriate method of estimation is crucially important in any empirical analysis. Most studies exploit different methods of estimation on related empirical investigations and lack consensus regarding the use of any single method of estimation. In this thesis, however, we try to utilise multiple relevant techniques to arrive at the most appropriate technique of estimation based on the nature of the relevant variables and in keeping with the research goals defined in Chapter 3. These methods mainly include descriptive and multinomial procedures. The following discussion looks at the relevant methods we adopt in the empirical investigation.

5.3.1. Descriptive and Bivariate Method

The descriptive statistics and bivariate analysis are presented as a pre-multivariate analysis in this thesis. Where appropriate, in the descriptive statistics, we utilise averages, standard deviations and frequency distribution to understand the behaviour of different variables included in the empirical analysis.

Regarding bivariate analysis, we utilise the non-parametric test known as the chi-square test to observe the correlation between women's autonomy and the corresponding determinants. As the autonomy measures are classificatory in nature, the above test may be considered the most appropriate test to gauge the association between those variables. The chi-square test can be written as:

$$\chi^2 = \sum \left[\frac{(observerd\ \ frequencies - \exp ected\ \ frequencies)^2}{\exp ected\ \ frequencies} \right]$$

The chi-square test assumes a random sample, frequency form, observations which are independent of each other, a sufficiently large sample size and observed frequencies equal to the expected frequencies. We formulate the null hypothesis as $H_0 : P_1 = P_2 = P_3$ which describes that the proportion of women in each category of autonomy (defined in three levels) is the same in association with the corresponding determinants.

5.3.2. Multivariate Analysis

As discussed in Chapter 4, the autonomy measures are categorical in nature and can be strictly ordered across different levels of autonomy. The prime objective of this research is to investigate the relative importance of different determinants on women's autonomy where autonomy is measured in adjacent categories, typically called '*no autonomy'*, *'partial autonomy'* and *'strong autonomy'*. Specifically, we attempt to estimate the effect of different determinants

on adjacent categories of autonomy. Furthermore, we expect that coefficients of some determinants (also called factors) may revise their values across adjacent categories of autonomy as shown in the section on empirical settings. Ordered logit models may provide the most appropriate techniques, in keeping with the stated objectives of empirical analysis. Broadly, ordered logit models can be classified into three main approaches depending on the probabilities of interest and application of the proportional odd ratio. These approaches are commonly known as the cumulative, stage and adjacent approach. These approaches differ in terms of probabilities of interest and the type of odds ratio used. The *Cumulative Approach* considers only two categories of the 'multiple category outcomes' variable and is widely used in sociological research. The *Stage Approach* considers strict irreversibility in the adjacent categories of the outcome variable. However the *Adjacent Approach* allows analysis of adjacent categories and compares the probability of being at a given point compared to the probability of being at the next highest point. Therefore, the *Adjacent Approach* appears the most appropriate given the empirical design of this thesis. We also consider the widely used *Cumulative Approach* and comment on common mistakes committed by most of the previous studies on this topic.

The following discussion details both the *Cumulative Approach* and the *Adjacent Approach* used for empirical analysis in this thesis by following Fullerton (2009) and Agresti (2007).

5.3.2.1. The Cumulative Approach

The cumulative approach is widely used in the field of sociological research. This approach splits the dependent variable into *K-1* logit equations. For instance, the four category outcome variable (three categories of women's autonomy in our case) corresponds to three binary logit equations, where in each equation the first category is coded as '1', and the rest of the categories are grouped together and coded as '0'. In this case the probability of interest is the cumulative probability that is the probability of being less than or equal to a given category. This cumulative approach noted by Fullerton (2009) is comprised of three models based on the assumption of varying degrees of the proportional odds ratio. These models are formally known as *Proportional Odds, Partial Proportional Odds and Proportional Odds with Partial Proportionality Constraints*.

Proportional Odds Model:

The proportional odds model is frequently used in logit model for ordinal dependent variables and avoids assigning arbitrary scores for the categories. This model assumes that the cut points between categories are unknown. This model can be written as:

$$\log\left(\frac{p(y \le k|x)}{p(y > k|x)}\right) = \tau_k - \beta x \qquad (1 \le k < K) \qquad (5.9$$

where *'k'* is a category, *'x'* is a vector of independent variables, *'τ'* is a cut point, and *'β'* is a vector of logit coefficients. The signs (-, +) with the coefficient carry their usual meanings as an increase in *'x'* may have a corresponding direction of effect on the dependent variable *'y'*. The cut points are restricted in as $\tau_1 < \tau_2 \ldots < \tau_{K-1}$. Finally, the probability of interest for any given category (k) appears as:

$$p(y = k|x) = \begin{cases} F(\tau_1 - \beta x) & k = 1, \\ F(\tau_k - \beta x) - F(\tau_{k-1} - \beta x) & 1 < k \le K - 1, \\ 1 - F(\tau_{k-1} - \beta x) & k = K, \end{cases} \qquad (5.9$$

where *'F'* is the logistic cumulative density function (cdf), and all other notations carry the usual meanings as described earlier.

The key assumption of the proportional odd model is that the coefficients ($\beta^{'s}$) must remain unchanged across logit equations (specifically, across the categories). However the cut points (specifically the intercepts) change across the logit equations. It is essential to note that the proportional odds model gives biased results if the above assumption is violated. The assumption of proportionality can be tested by using the Wald test which tests the equality of $\beta^{'s}$ across the logit equations or categories as suggested in Brant (1990). However if the above assumption is violated, we may use the following alternatives.

Partial Proportional Odds Model:

The partial proportional odds model is an extension to the proportional odds model and used if the assumption of proportionality is violated. Therefore, the partial proportional odds model allows coefficients ($\beta^{'s}$) to vary across the logit regressions. Accordingly, the probability of any given category *(k)* in the partial proportional odds model can be written as:

$$p(y = k|x) = \begin{cases} F(\tau_1 - \beta_{11}x_1 - \beta_2 x_2) & k = 1, \\ F(\tau_k - \beta_{1k}x_1 - \beta_2 x_2) - & \\ F(\tau_{k-1} - \beta_{1k-1}x_1 - \beta_2 x_2) & 1 < k \le K - 1, \\ 1 - F(\tau_{K-1} - \beta_{1K-1}x_1 - \beta_2 x_2) & k = K \end{cases} \qquad (5.12$$

where *'F'* is the logistic cumulative density function (cdf), β_1 represents a vector of logit coefficients that is allowed to vary across logit equations, and β_2 denotes a vector of coefficients constrained to be constant across the corresponding logit equations, the other notations carry the stated interpretations as discussed.

Proportional Odds with Partial Proportionality Constraints Model (POPPC):

In case of violation of the proportionality assumption, Brant (1990) suggests the possibility of proportional odds with partial proportionality constraints for the coefficients. The coefficient may vary proportionally, which may be shown as:

$$\beta_k = \theta_k \beta, \qquad (1 \le k < K) \tag{5.13}$$

In this model the logit coefficients ($\beta^{'s}$) are allowed to change by a common factor θ_k. Accordingly, the probability of any given category (k) can be shown, such as in the following equation:

$$p(y=k \mid x) = \begin{cases} F(\tau_1 - \theta_1\beta_1 x_1 - \beta_{21} x_2 - \beta_3 x_3) & k = 1, \\ F(\tau_k - \theta_k\beta_1 x_1 - \beta_{2k} x_2 - \beta_3 x_3) - & \\ F(\tau_{k-1} - \theta_{k-1}\beta_1 x_1 - \beta_{2k-1} x_2 - \beta_3 x_3) & 1 < k \le K-1, \\ 1 - F(\tau_{K-1} - \theta_{K-1}\beta_1 x_1 - \beta_{2K-1} x_2 - \beta_3 x_3) & k = K \end{cases} \tag{5.12}$$

All notations in this equation carry the stated meanings except $\beta 3$ which is s a vector of logit coefficients that do not vary, and x_1, x_2, and x_3 are vectors of independent variables. It should be noted that the proportional odds model is a special case of the POPPC model where the proportional odds assumption holds for every independent variable.

Generalized Ordered Model:

The generalized ordered model is suggested as appropriate in Fu (2012), Maddala (1983), McCullah and Nelder (1989), where the proportionality assumption is still violated in the above models. The generalized model allows all coefficients to vary across logit equations. Therefore, in the generalised ordered model, the probability of any given category can be shown as:

$$p(y=k \mid x) = \begin{cases} F(\tau_1 - \beta_1 x) & k = 1, \\ F(\tau_k - \beta_k x) - F(\tau_{k-1} - \beta_{k-1} x) & 1 < k \le K-1, \\ 1 - F(\tau_{K-1} - \beta_{K-1} x) & k = K \end{cases} \tag{5.13}$$

In this model, all notations refer to the similar meanings as already explained. It should also be noted that both the partial proportional odds and POPPC models are special cases of the generalized ordered model where, (a) the proportional odds assumption holds for at least one variable, and (b) two or more variables change by a common factor (for the POPPC model.

5.3.2.2. Adjacent Approach

Unlike the *Cumulative Approach,* the *Adjacent Approach* allows us to estimate the probability of the adjacent category of the multi-category dependent variable. Therefore, when the categories are of a substantive nature as in this thesis, the use of the cumulative approach is not appropriate, as pointed out by Fullerton (2009). Similar to the cumulative approach, the adjacent approach also consists of four different types of logit models, discussed as follows.

Adjacent Category Model:

The adjacent category model is a constrained form of the multinomial logit model, noted by Goodman (1983). This model is relevant when the adjacent categories of the dependent variable are of particular interest. Similarly to the proportional odds model, the adjacent category model also assumes validity of the proportionality assumption. Among others, Fullerton (2009) notes the equation of the adjacent category can be written as:

$$\log\left(\frac{pr(y = k|x}{pr(y = k+1|x}\right) = \tau_k - \beta x \qquad (1 \le k < K) \qquad (5.14$$

The equation for the probability of any given category in the adjacent category model form can be written as:

$$pr(y=k|x) = \begin{cases} \dfrac{\exp\left(\sum_{r=k}^{K-1}(\tau_r - \beta x)\right)}{1+\sum_{q=1}^{K-1}\left[\exp\left(\sum_{r=q}^{K-1}(\tau_r - \beta x)\right)\right]} \\ 1 - \sum_{q=1}^{K-1} pr(y=q|x) \end{cases} \qquad 1 \le k \le K-1,\ k = K \qquad (5.15$$

All notations carry the standard meanings and explanations as described in previous models (for the POPPC model).

Partial Adjacent Category Model:

In the partial adjacent category model some of the coefficients are allowed to vary across the adjacent categories and the rest of the coefficients are constrained to be constant according to the proportionality assumption. Thus by modifying the above model, we can write the probability of any given category in the partial adjacent category model as:

$$pr(y=k|x) = \begin{cases} \dfrac{\exp\left(\sum_{r=k}^{K-1}(\tau_r - \beta_1 x_{1r} + \beta_2 x_2)\right)}{1+\sum_{q=1}^{K-1}\left[\exp\left(\sum_{r=q}^{K-1}(\tau_r - \beta_1 x_{1r} + \beta_2 x_2)\right)\right]} & 1 \le k \le K-1,\ k = K \\ 1 - \sum_{q=1}^{K-1} pr(y=q|x) \end{cases} \quad (5.16$$

All notations show similar meanings expect x_1 and x_2 where the corresponding coefficient β_1 varies, however, β_2 remains unchanged across the adjacent categories according to the proportionality assumption.

Adjacent Category with Partial Proportionality Constraints:

The ACPPC is another category of model within the *Adjacent Category Approach* which allows some coefficients to vary by a common factor (φ) through relaxation of the proportionality assumption. Accordingly the probability of a given adjacent category can be written as:

$$pr(y=k|x) = \begin{cases} \dfrac{\exp\left(\sum_{r=k}^{K-1}(\tau_r - \varphi_r\beta_1 x_1 - \beta_{2r} x_2 - \beta_3 x_3)\right)}{1+\sum_{q=1}^{K-1}\left[\exp\left(\sum_{r=q}^{K-1}(\tau_r - \varphi_r\beta_1 x_1 - \beta_{2r} x_2 - \beta_3 x_3)\right)\right]} & 1 \le k \le K-1,\ \ k = K \\ 1 - \sum_{q=1}^{K-1} pr(y=q|x) \end{cases} \quad (5.17$$

All notations show similar meanings and x_1, x_2 x_3 where the corresponding coefficient β_1 varies with the common factor, however, β_2 varies freely across the logit equations and β_3 remains unchanged across the adjacent categories according to the proportionality assumption.

Multinomial Model:

The multinomial model is the final model in the classification of an adjacent approach of logit models. According to this model all coefficients vary freely across the logit models or adjacent categories of the dependent variable. Accordingly, the probability of the given category can be described as:

$$pr(y=k|x)=\begin{cases}\dfrac{\exp\left(\sum_{r=k}^{K-1}(\tau_r-\beta x)\right)}{1+\sum_{q=1}^{K-1}\left[\exp\left(\sum_{r=q}^{K-1}(\tau_r-\beta x)\right)\right]} & 1\le k\le K-1,\ k=K \\ 1-\sum_{q=1}^{K-1} pr(y=q|x)\end{cases} \qquad (5.18$$

All notations are explained as in previous equations. The output of this model is typically shown in a series of comparisons or the adjacent comparisons.

The multinomial logit (MNL), however, also suffers from potential problems specifically; the estimation of the MNL is subject to the so-called independence of irrelevant alternatives (IIA) assumption—which roughly implies that it cannot matter for the results, which of the alternatives is chosen for the base category. Empirically, however, the IIA assumption is frequently violated—i.e., results tend to be sensitive to the specification of the base category. A remedy suggested for this is the multinomial probit model, which is not prone to the IIA criticism.

It is important to note that the application of IIA property is neither relevant nor particularly restrictive in the context of current thesis. For example Jonathan and Rabinowitz (2008) through simulations show MNL (even in the absolutely unordered choice data) nearly always provides more accurate results than MNP, even when the IIA assumption is severely violated. The above study urges researchers to reconsider the applications of MNP models. Further Dow and Endersby (2004) also provide full length discussion on the advantages of MNL over the MNP.

5.4. Concluding Remarks

This Chapter presents the empirical settings for further empirical analysis of women's autonomy in the household, and corresponding methods of estimation adopted in this thesis. In the empirical settings, all relevant estimable models corresponding to aggregated economic decision-making autonomy and family planning decision-making autonomy, along with respective sub-dimensions, are presented. Furthermore, given the nature of the data and the main purpose of this study, an appropriate methodology of estimation is proposed by highlighting the limitations of conventional methods adopted in similar past research. This Chapter also presents a detailed discussion on the properties of alternative methods where corresponding necessary assumptions are satisfied.

CHAPTER 6

DESCRIPTIVE EVIDENCE

6.1. Introduction

This Chapter is made up of three sections. Section 6.2 describes the distribution of the multilevel measures of women's autonomy for the overall sample and across four different states/provinces corresponding to the urban and rural regions of Pakistan. Section 6.3 presents evidence of the correlation between these regions and the varying levels of women's multidimensional autonomy. Specifically it presents two-way ANOVA (analysis of variance) results to explain the relationship between regions and women's autonomy. Finally, section 6.4 presents a simple correlation or test of independence corresponding to each of the determinants on women's autonomy in economic and family planning decision-making spheres, along with the corresponding sub-dimensions of women's autonomy.

6.2. Descriptive Evidence of Autonomy Measures

Table 6.1 illustrates the proportional distribution of economic and family planning decision-making of women's autonomy across urban and rural regions of Pakistan. The lower to upper bounds are respectively characterised as '*no autonomy*', '*partial autonomy*' and '*strong autonomy*' in decision-making at the household level. The data shows mixed results across different dimensions of economic decision-making and family decision-making, and the corresponding sub-dimension aspects of women's autonomy. In terms of regional variation, women from urban regions show a relatively high proportion of upper bound autonomy ('*strong autonomy'*) compared with women from rural regions.

Overall data shows that a large proportion of women have *'no autonomy'* in either economic decision-making or the family planning aspects of decision-making at the household level. These observations remain consistent across different sub-dimensions of autonomy, and across urban and rural regions of Pakistan. The overall index of economic decision-making shows 44 per cent of women have '*no autonomy'*, followed by 31 per cent with '*partial autonomy'* and 25 per cent with '*strong autonomy*' at the household level in the urban region.

Similarly, the rural region data shows 54 per cent with '*no autonomy*', followed by 30 per cent with '*partial autonomy*' and 16 per cent with '*strong autonomy'*. We observe similar trends in all sub-dimensions of autonomy, apart from decisions regarding food, clothing and footwear, where we find relatively higher proportions of women with '*strong autonomy'* in the urban as well as rural regions of Pakistan.

Table 6.1: Women's Autonomy in Decision-making around Economic and Family Planning Aspects.

Autonomy Indices	Urban			Rural		
	No Autonomy (%)	Partial Autonomy (%)	Strong Autonomy (%)	No Autonomy (%)	Partial Autonomy (%)	Strong Autonomy (%)
Indices of Decision-Making in Household Economics						
Food	2842 (48)	1180 (20)	1869 (32)	5644 (59)	1629 (17)	2360 (25)
Clothing & Footwear	2026 (34)	1422 (24)	2443 (41)	4898 (51)	2329 (24)	2406 (25)
Medical Treatment	2549 (43)	2358 (40)	984 (17)	4896 (51)	3728 (39)	1009 (10)
Recreation & travel	2855 (48)	2437 (41)	599 (10)	5210 (54)	3683 (38)	740 (8)
Overall	***2592 (44)***	***1826 (31)***	***1473 (25)***	***5133 (54)***	***2851 (30)***	***1521 (16)***
Indices of Decision-Making in Family Planning						
Use of Contraceptives	1471 (25)	4100 (71)	243 (4)	3285 (35)	5847 (62)	372 (4)
Additional Child	1688 (29)	3894 (67)	232 (4)	3663 (39)	5498 (58)	343 (4)
Overall	***1744 (30)***	***3837 (66)***	***233 (4)***	***3897 (41)***	***5323 (56)***	***380 (4)***

Source: Author's calculations

Similar to the economic decision-making autonomy of women, the family planning aspect also reveals women's autonomy is highly constrained in Pakistan. For example in the urban region almost 30 per cent of women identified with '*no autonomy*', followed by 66 per cent '*partial autonomy'* and only 4 per cent with '*strong autonomy'*. Compared to the rural region we observed 41 per cent, 56 per cent and 4 per cent respectively. These trends are also evident in the decision-making spheres regarding '*contraceptive use'* and '*having more children'*, both in the urban and rural regions of Pakistan.

Furthermore, we investigate if there are any distributional differences among different levels of autonomy across the four different states and corresponding regions. Table 6.2 presents the distribution of autonomy across all four states and the corresponding urban and rural regions. The data shows that women from the province of Punjab appear relatively more autonomous in

economic decision-making compared to women from all other provinces. Similarly these trends also prevail in the sub-dimensions of economic decision-making. However, regarding the family planning decision-making aspects we observe mixed trends within the four states. Interestingly, data relating to the urban regions within the province of Baluchistan reveals a greater number of women with relatively stronger autonomy compared with other provinces, as well as the rural regions of Baluchistan. However, it is important to note that the province of Baluchistan is considered relatively conservative in allowing women greater independence to make household decisions.

Table 6.2: Women's Autonomy in Economic and Family Planning Decision-making (Province/State level)

	Punjab		Sindh		NWFP		Baluchistan	
	Urban	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*
Economic Decision-Making Autonomy Aggregated								
No autonomy (%)	367 (15)	681 (20)	323 (21)	893 (38)	297 (27)	948 (39)	561 (70)	1122 (77)
Partial autonomy (%)	1634 (67)	2202 (65)	1186 (76)	1453 (62)	745 (67)	1368 (57)	240 (30)	315 (21)
Strong Autonomy (%)	420 (17)	513 (15)	42 (3)	6 (0.2)	71 (6)	103 (4)	5 (1)	29 (2)
Sub-dimensions of Autonomy:								
Food								
No autonomy (%)	622 (26)	971 (29)	662 (43)	1420 (60)	910 (82)	1999 (83)	648 (80)	1254 (86)
Partial autonomy (%)	586 (24)	751 (22)	410 (26)	588 (25)	75 (7)	168 (7)	109 (14)	122 (8)
Strong Autonomy (%)	1213 (50)	1674 (49)	479 (31)	344 (15)	128 (12)	252 (10)	49 (6)	90 (6)
Clothing & Footwear								
No autonomy (%)	440 (18)	857 (25)	454 (29)	1292 (55)	540 (49)	1564 (65)	592 (73)	1185 (81)
Partial autonomy (%)	622 (26)	824 (24)	469 (30)	911 (39)	163 (15)	382 (16)	168 (21)	212 (14)
Strong Autonomy (%)	1359 (56)	1715 (51)	628 (40)	149 (6)	410 (37)	473 (20)	46 (6)	69 (5)
Medical Treatment								
No autonomy (%)	867 (36)	1475 (43)	628 (40)	1177 (50)	461 (41)	1099 (45)	593 (74)	1145 (78)
Partial autonomy (%)	923 (38)	1151 (34)	687 (44)	1113 (47)	553 (50)	1180 (49)	195 (24)	284 (19)
Strong Autonomy (%)	631 (26)	770 (23)	236 (15)	62 (3)	99 (9)	140 (6)	18 (2)	37 (3)
Recreation & Travel								
No autonomy (%)	963 (40)	1588 (47)	743 (48)	1216 (52)	524 (47)	1230 (51)	625 (78)	1176 (80)
Partial autonomy (%)	1008 (42)	1241 (37)	748 (48)	1115 (47)	508 (46)	1073 (44)	173 (21)	254 (17)
Strong Autonomy (%)	450 (19)	567 (17)	60 (4)	21 (1)	81 (7)	116 (5)	8 (1)	36 (2)

continue…

Table 6.2 (…continued) : Women's Autonomy in Economic and Family Planning Decision-making (Province/State level)

	Punjab		Sindh		NWFP		Baluchistan	
	Urban	***Rural***	***Urban***	***Rural***	***Urban***	***Rural***	***Urban***	***Rural***
Family Planning Autonomy								
Aggregated								
No autonomy (%)	453 (19)	923 (28)	263 (17)	493 (21)	106 (10)	446 (19)	528 (66)	1151 (79)
Partial autonomy (%)	1861 (78)	2286 (68)	1202 (79)	1706 (73)	957 (88)	1856 (78)	218 (27)	294 (20)
Strong Autonomy (%)	76 (3)	129 (4)	65 (4)	136 (6)	30 (3)	74 (3)	55 (7)	11 (1)
Use of Contraceptives								
No autonomy (%)	512 (21)	993 (30)	291 (19)	580 (25)	109 (10)	480 (20)	559 (70)	1232 (85)
Partial autonomy (%)	1800 (75)	2211 (66)	1165 (76)	1609 (69)	957 (88)	1825 (77)	178 (22)	202 (14)
Strong Autonomy (%)	78 (3)	134 (4)	74 (5)	145 (6)	27 (2)	71 (3)	64 (8)	22 (2)
More Children								
No autonomy (%)	611 (26)	1122 (34)	376 (25)	777 (33)	119 (11)	507 (21)	582 (73)	1257 (86)
Partial autonomy (%)	1705 (71)	2098 (63)	1095 (72)	1424 (61)	944 (86)	1797 (76)	150 (19)	179 (12)
Strong Autonomy (%)	74 (3)	118 (4)	59 (4)	133 (6)	30 (3)	72 (3)	69 (9)	20 (1)

Source: Author's calculations

In Table 6.2 we observe that regions (urban and rural divide) and different states clearly show a skewed distribution of women's autonomy in the household. We investigate the empirical relevance of states and regions to understand the role they play in the variations of autonomy by using a two-way ANOVA analysis.[1]

Results of the ANOVA estimations are shown in Table 6.3. We observe a strong correlation between states and regions to the index of economic decision-making autonomy, as well as to the sub-dimensions of autonomy. Furthermore, we find consistently significant results corresponding to the interactive term of states and region (urban and rural) in distinguishing among different levels of autonomy in economic decision making aspect, apart from the recreation and travel related decision-making aspects of autonomy. Similar results are observed for the role of states, regions and the interactive variable of both variables regarding family planning and its sub-dimensions of autonomy. These results confirm why further empirical analysis of women's autonomy must take into consideration the significance of states and regions.

Table 6.3: Two-way ANOVA Results

Autonomy Measures (outcome variable)	**Region**		**Provinces**		**Interaction (provinces*region)**	
	F-statistics (df)	***P-value***	***F-statistics (df)***	***P-value***	***F-statistics (df)***	***P-value***
Economic Decision-making Autonomy	247.35 (1)	0.001	953 (3)	0.001	13.23 (3)	0.001
Food	200.65 (1)	0.001	1563.37 (3)	0.001	38.36 (3)	0.001
Clothing & Footwear	691.38 (1)	0.001	1686.61 (3)	0.001	87.03 (3)	0.001
Medical Treatment	69.46 (1)	0.001	181.23 (3)	0.001	4.89 (3)	0.001
Recreation & Travel	61.8 (1)	0.001	396.81 (3)	0.001	1.93 (3)	0.120
Family Planning Decision-making Autonomy	123.42 (1)	0.001	893.83 (3)	0.001	14.35 (3)	0.001
Use of Contraceptives	142.39 (1)	0.001	807.35 (3)	0.001	10.56 (3)	0.001
More Children	140.41 (1)	0.001	910.96 (0)	0.001	14.35 (3)	0.001

Note: Observations 15524, RM 0.54 and Adjusted R-squared 0.17

Table 6.3 illustrates the variables in women's autonomy, in total and across states and regions. We further replicated the above analysis against the sub-dimensions of the two main aspects of autonomy at the household level in Pakistan. The following discussion presents the simple correlation analysis corresponding to each of the identified determinants and different dimensions of autonomy, before proceeding to the multivariate analysis in the coming Chapters.

[1] The two-way analysis discussed in this section has a limited scope, therefore we do not intend to provide a full discussion regarding other assumptions and the statistical treatment required in the ANOVA setup. The main purpose of this analysis is to determine the relevance of states and regions to different levels of autonomy at the household level.

6.3. Bivariate Evidence of Autonomy and Determinants

In this section, we present a proportional distribution[2] and test of independence[3] of each of the determinants across different levels of all dimensions of women autonomy discussed in the above.

Table 6.4 at the end of this Chapter shows the results of the chi-square (χ^2) test of independence association (measuring the association between nominal variables) of different determinants of economic decision-making autonomy (aggregated index) across urban and rural regions. We observe that the employment status of women is significantly associated with different levels of autonomy. Data analysis reveals 91 per cent of the total sample of women was classed as unemployed, a status that was inversely associated (in terms of percentage sample distribution) with increasing levels of autonomy. Correspondingly, the proportion of employed women with '*partial autonomy*' was substantially higher, while decreases for the upper bounds of strong levels of autonomy. The household size indicates that women from smaller households have significantly higher levels of autonomy compared with those from larger than average households (52 per cent of the total sample). Consistent with this observation we observe that household size excluding children (refers to the number of elderly persons and/or relatives of the husband living at the same house) also exerts downward pressure on the autonomy of the woman within that particular household. Contrary to the above, we find that an increase in the number of children (regardless of the sex of the child) results in a higher proportion of women showing greater levels of women autonomy within the household.

When considering family formation, we observe that women from nuclear family systems reflect greater proportions amongst the higher levels of autonomy relative to those belonging to extended family formations (87 per cent of the total sample). Interestingly, the presence of a mother-in-law in the household results in a lower proportion of women in the higher levels of autonomy. Age structure also presents interesting observations; the higher the age bracket, the greater the proportion of women with increased levels of autonomy. Similarly, women's increasing educational levels also show a corresponding increase in the level of autonomy, relative to women with less or no education. For example, data shows that women with eight or more years of education will be proportionally stronger in the upper bounds of household autonomy. We also expect that the characteristics of a woman's male counterpart, for instance his educational level and income status, will also influence her level of autonomy

[2] Proportional distribution refers to the frequency of cases against each level of autonomy. These should be read from left to right within each row of the table.

[3] Association is statistically tested by utilising the Chi-square test of independence where the null hypothesis is that a corresponding determinant is independent of the autonomy variable. This test is commonly used when the measures are in nominal or categorical variables in nature. The 5 per cent level of significance has been chosen for decision-making.

within the household. Results show that a husband's level of education and income status is positively associated with his wife's autonomy at the household level.

A more detailed analysis is provided in Appendix Tables 6.4.1, 6.4.2, 6.4.3 and 6.4.4.[5] The results detail descriptive evidence corresponding to sub-dimensions of women's autonomy in association with the corresponding determinants. These sub-dimensions relate to autonomy around decisions regarding food, clothing and footwear, recreation and travel and medical treatment autonomy at the household level. Data shows that a relatively large proportion of women, along with given determinants, appear with higher levels of autonomy in clothing and footwear related decisions compared with other sub-dimensions of economic autonomy. We also note that medical treatment and recreation and independent travel are the most constrained aspects of women's autonomy. These findings clearly indicate the presence of a conservative approach regarding the public exposure of women. Further, we observe that all of these determinants are significantly associated with all of the sub-dimensions of women's autonomy in the context of economic decision-making.

Along similar lines, we present descriptive evidence of the family planning context along with the corresponding determinants. Table 6.5 at the end of this Chapter shows how each of the determinants vary across different levels of autonomy. For instance, employed women are reflected in substantially higher proportions of those with '*partial autonomy*' compared with women who are classed as unemployed. However, we observe a small number of employed women reflect '*strong autonomy*' in family planning decision-making matters within the household. Corresponding to the size of a household, the data shows that women from relatively small households reflect more autonomy compared with women in larger households. These findings remain consistent with the other measure of household size, that is, the presence of only elderly persons or the relatives of the male partner in that household. The number of children, regardless of the child's gender, appears to lead to greater autonomy of the woman within the household.

Data also reveals that as the age of a woman increases, she has greater autonomy relative to the younger mothers in the sample. A woman's level of education substantially increases her autonomy within the household as observed in the economic decision-making context. Her husband's level of education, in contrast with the economic decision-making context, appears to play a greater role in the family planning context. Similarly, his income status appears to increase a woman's autonomy within the household. Consistent with these observations, data also shows that women from more affluent families have greater autonomy compared with those from relatively poorer families.

[5] All tables from Appendix Table 6.4.1 to Appendix Table 6.4.4 are presented in Appendix-I: Descriptive Evidence

Appendix Tables 6.5.1 and 6.5.2 [7] show respectively the descriptive evidence corresponding to the decision-making power of a woman regarding the use of birth control measures and choosing to have an additional child. Interestingly, the data shows that the majority of women reflect higher levels of autonomy in both of these aspects. Among other determinants, the earned income status and education level are observed to be highly associated with all sub-dimensions of family autonomy. Similarly, we witness that the increasing number of children also adds to women's autonomy in all decision-making dimensions. Furthermore, we find all other determinants significantly associated with all dimensions of family planning autonomy, except the 'presence of mother-in-law', both regarding birth control measures and having an additional child and 'family formulation' in only one dimensions of having an additional child.

6.4. Concluding Remarks

This Chapter provides the backdrop for further discussion regarding the possible causal relations between women's autonomy measures and the corresponding determinants. The discussion observes that women overall are generally constrained and presented with low degrees of autonomy in the household. Further, there exists a significant urban and rural divide with women from rural regions having less autonomy as compared to women from urban regions. The descriptive evidence also shows that women's autonomy varies across the four different states of the country. The simple test of independence depicts a significant association between the identified determinants and all measures of autonomy.

[7] Appendix Table 6.5.1 to Appendix Table 6.5.2 are presented in Appendix-I: Descriptive Evidence

Table 6.4: Economic Autonomy and Determinants (χ^2 results)

Determinants		Observations (%)	Levels of Autonomy			Significance (P-value)
			No (%)	Partial (%)	Strong (%)	
Employment Status	Unemployed	13879 (91)	35	58	7	<0.001
	Employed	1440 (9)	17	70	13	
Household Size	Below Average	5503 (36)	24	65	11	<0.001
	Average	1908 (12)	30	60	10	
	Above Average	7908 (52)	41	54	5	
Household Size Excluding Children	Below Average	5823 (38)	24	66	10	<0.001
	Average	2229 (15)	34	58	8	
	Above Average	7267 (47)	41	54	5	
Number of Sons	No son	3796 (25)	40	54	6	<0.001
	1 son	3727 (24)	34	58	8	
	2 & more sons	7796 (51)	30	62	8	
Number of Daughters	No daughter	4226 (28)	40	54	6	<0.001
	1 daughter	4087 (27)	33	59	8	
	2 & more daughters	7006 (46)	29	62	9	
Family Formation	Nuclear	1981 (13)	23	66	11	<0.001
	Extended	13338 (87)	35	58	7	
Mother-in-Law	Present	15168 (99)	33	59	8	<0.001
	Not Present	151 (1)	57	36	7	
Age Structure	15-19 years	781 (5)	52	46	2	<0.001
	20-24 years	2504 (16)	45	52	3	
	25-29 years	3184 (21)	36	57	7	
	30-34 years	2655 (17)	33	60	7	
	35-39 years	2642 (17)	26	63	11	
	40-44 years	2086 (14)	25	64	11	
	45-49 years	1467 (10)	27	62	11	
Woman's Level of Education	No education	10792 (70)	38	56	6	<0.001
	5-years education	1649 (11)	25	64	11	
	8-years education	741 (5)	22	64	14	
	10-12yrs education	1095 (7)	22	65	13	
	Higher education	1007 (7)	19	69	12	
Husband's Level of Education	No education	5113 (33)	37	58	5	<0.001
	5-years education	2234 (15)	33	62	5	
	8-years education	1566 (10)	32	60	8	
	10-12yrs education	2225 (15)	32	61	7	
	Higher education	2237 (15)	28	65	7	
Husband's Income Status	Low income	8595 (56)	37	57	6	<0.001
	Middle income	4526 (30)	29	65	6	
	High income	464 (3)	20	69	11	
Family Income Status	Low income	5660 (37)	38	56	6	<0.001
	Middle income	3026 (20)	35	58	7	
	High income	6633 (43)	29	61	10	

Source: Author's calculations

Table 6.5: Family Planning Decision-making Autonomy and Determinants (χ^2 results)

Determinants		Observations (%)	Levels of Autonomy			Significance (P-value)
			No (%)	Partial (%)	Strong (%)	
Employment Status	Unemployed	13879 (91)	29	67	4	<0.001
	Employed	1440 (9)	21	76	3	
Household Size	Below Average	5503 (36)	27	70	4	<0.001
	Average	1908 (12)	30	69	4	
	Above Average	7908 (52)	41	67	4	
Household Size Excluding Children	Below Average	5823 (38)	27	69	5	<0.001
	Average	2229 (15)	30	66	4	
	Above Average	7267 (47)	29	68	3	
Number of Sons	No son	3796 (25)	32	65	4	<0.001
	1 son	3727 (24)	28	68	4	
	2 & more sons	7796 (51)	27	69	4	
Number of Daughters	No daughter	4226 (28)	32	65	3	<0.001
	1 daughter	4087 (27)	27	70	3	
	2 & more daughters	7006 (46)	27	68	4	
Family Formation	Nuclear	1981 (13)	30	66	4	<0.001
	Extended	13338 (87)	28	68	4	
Mother-in-Law	Present	15168 (99)	28	68	4	<0.001
	Not Present	151 (1)	27	68	5	
Age Structure	15-19 years	781 (5)	34	62	4	<0.001
	20-24 years	2504 (16)	30	66	4	
	25-29 years	3184 (21)	27	69	4	
	30-34 years	2655 (17)	28	69	3	
	35-39 years	2642 (17)	27	70	4	
	40-44 years	2086 (14)	28	68	4	
	45-49 years	1467 (10)	30	67	4	
Woman's Level of Education	No education	10792 (70)	33	62	4	<0.001
	5-years education	1649 (11)	20	77	3	
	8-years education	741 (5)	18	79	2	
	10-12yrs education	1095 (7)	19	78	3	
	Higher education	1007 (7)	12	86	2	
Husband's Level of Education	No education	5113 (33)	36	60	5	<0.001
	5-years education	2234 (15)	28	67	5	
	8-years education	1566 (10)	27	69	4	
	10-12yrs education	2225 (15)	24	73	3	
	Higher education	2237 (15)	19	78	3	
Husband's Income Status	Low income	8595 (56)	30	66	4	<0.001
	Middle income	4526 (30)	26	70	4	
	High income	464 (3)	18	80	2	
Family Income Status	Low income	5660 (37)	31	65	4	<0.001
	Middle income	3026 (20)	30	66	4	
	High income	6633 (43)	26	71	3	

Source: Author's calculations

CHAPTER 7

ECONOMIC DECISION-MAKING AUTONOMY: AGGREGATED RESULTS

7.1. Introduction

This Chapter discusses the empirical evidence obtained through an estimation of the theoretical framework of analysis developed in Chapter 3. More specifically, the empirical analysis corresponds to the determinants of women's autonomy in the context of aggregate economic decision-making from an overall perspective, as well as through urban and rural stratifications. The aggregate economic decision-making, alternatively called economic decision-making autonomy, refers to a woman's decision-making power relative to her husband in the spheres of purchasing household food items, clothing and footwear, recreation and travel and medical treatment-related items. However, the disaggregated[1] analysis in terms of each of the above sub-dimensions of autonomy is presented in Chapter 8 of this thesis.

Consistent with the theoretical framework of analysis, the discussion in this Chapter is organised in two ways relating to the nature of the determinants of women's autonomy. These are relevant to a woman's potential threat utilities affecting her economic decision-making power in the household, as well as other categories of determinants which include individual embedded characteristics (education and age), the spouse's financial status and level of education, family socio-economic status and geographic identifications. We also discuss if the *Cumulative Approach* of conventional ordered logit model fails to satisfy the necessary parallel line assumption and if the appropriate multinomial method of *Adjacent Approach,* consistent with the nature of variables used in this analysis, is required.[2] Therefore, we present the results of ordered logit applied with both of the above approaches. Furthermore, we present different arguments regarding the potential endogeniety issue in the existing empirical research in this area.

[1] The disaggregated analysis corresponds to the sub-dimensions of women's economic autonomy including food, clothing and footwear, recreation and travel and medical treatment-related decision-making relative to their partners at the household level.
[2] For details refer to Chapter 5.

7.2. Threat Options and Economic Decision-making Autonomy

Results of the economic decision-making autonomy model (Equation 5.1) estimated using the conventional ordered logit model, from overall as well as urban and rural regions, are illustrated in Table 7.1 at the end of this Chapter. The results of the ordered logit model are passed through a battery of statistical tests to confirm the validity of parallel line or proportionality assumptions. [4] Correspondingly, the proportionality test confirms that the parallel line assumption is not satisfied in ordered logit model settings. This implies that the results of the ordered logit model are imprecise and may lead to ambiguous conclusions. [5] Therefore, multinomial logit model specification may be a more appropriate technique for further empirical analysis. It is also important to note that we make additional amendments in the usual multinomial logit settings, by changing the reference category within each of the adjacent categories of the dependent variable, instead of considering the first category as the reference category throughout the estimations. Specifically, we attempt to estimate the multinomial logit settings in the categories of '*partial'* to '*no autonomy*' and '*strong'* to '*partial autonomy*' to investigate the varying effects of each of the determinants of women's economic decision-making autonomy.

Threat options, as specified in Chapter 3, encompass a woman's earned income and the household composition, the latter being further segregated into two components; elderly persons and relatives of the husband residing at the same household, and the number of children. Table 7.1 (*Panel-I)* shows the results for the first threat option, of multinomial logit settings parallel to the ordered logit settings for the overall sample. Results from the ordered logit model depict that women classified as employed (has earned income) show higher autonomy levels compared with women classified as unemployed (has an unearned income status). For example, employed women were observed with 1.47 times greater odds having higher level of autonomy compared with unemployed women, statistically significant at the 1 per cent level of confidence. Similarly, the ordered logit results for urban (*Panel-II*) and rural regions (*Panel-III*), found that employed women were respectively 1.63 and 1.39 more likely to have a greater level of autonomy, compared with unemployed women. Again, these results are also statistically significant at the 1 per cent level of confidence. However, it is crucially important to note that the ordered logit model does not satisfy the proportionality assumption[6] in these results, therefore affecting their

[4] The proportionality, or the parallel line assumption, assumes that the partial effects of the relevant independent variables remain constant across adjacent categories of the dependent variable.

[5] For comparative purposes, however, we keep the results of the ordered logit model throughout the analysis and also provide a brief discussion highlighting the differences. This distinction has been seldom observed in previous studies on a similar topic.

[6] The approximate likelihood-ratio test of proportionality of odds across response categories is: chi2 (31) = 207.2 Prob > chi2 = 0.00.

validity; earned income may not be relevant in increasing women's autonomy within the categories of '*no autonomy*', '*partial autonomy*' and '*strong autonomy*'.

As a result, we prefer the multinomial logit as an appropriate technique over the more conventional ordered logit method of estimation. Table 7.1 (*Panel-I*) depicting employment status results, shows that amongst all women respondents, those who were employed (have an earned income) have a 1.63 and 1.20 times greater odds of having '*partial'* as opposed to '*no autonomy*', and '*strong*' as opposed to '*partial autonomy*' respectively. Correspondingly, within the urban regions (*Panel-II*), employed women have 1.63 greater odds of having '*strong autonomy'* as opposed to '*partial autonomy'*, however, the rates of '*partial autonomy'* compared to '*no autonomy*' are not statistically significant. In contrast, we find that employed women in the rural regions are 1.81 times greater odds to have '*partial autonomy'* over '*no autonomy*', but rates of '*strong autonomy*' to '*partial autonomy*' lack statistical significance (*Panel-III*). This implies that employed women appear to have higher levels of autonomy relative to unemployed women (unearned income status) in economic decision-making spheres within the household. Further, we learn that the regional divide plays an important role by increasing the rates of '*strong autonomy'* over '*partial autonomy*' in the urban region and '*partial autonomy*' over '*no autonomy*' in the rural region.

It is also observed through the results presented in Table 7.1 that the outcome of ordered logit models and the multinomial logit models have different implications. The ordered logit findings are consistent with the existing literature; that earned income monotonically increases women's autonomy. However, multinomial logit settings confirm the varying effects of earned income on different levels of autonomy. Therefore, the multinomial logit model partially confirms the evidence that earned income has an association with women's autonomy. This distinction has never been made in the current literature and can therefore be considered an important contribution of this thesis. These differences are further highlighted in the analysis of women's autonomy from an urban and rural perspective. Therefore, we consider and discuss results of the multinomial logit estimations in the rest of this Chapter.

The second threat option refers to the composition of a household in terms of the increasing household size[7] which may significantly influence women's autonomy. We test three areas of household size for the effects on women's autonomy. Firstly, we refer to all household members, including elderly persons, relatives of the husband and the number of children. Secondly, we refer to only the presence of elderly persons and relatives of the husband. Thirdly,

[7] The two main components of the household size are: elderly persons and relatives of husband living at the same household and number of children. The aggregate household size is quantified as '*below average*', '*average*', and '*above average*'. Specifically, '*average*' is the mode for household size. It is important to note that the mode is recorded as almost 9 persons per household with a maximum of 55 persons per household.

we test the effect of the number of children as well as the gender of the children. The overall results (Table 7.1, *Panel-I*) show that increasing the total household size (including children, elderly persons and relatives of the husband) significantly decreases women's autonomy in the household. More precisely, an '*average size*' household (9 persons per household) diminishes women's autonomy to odds of 0.77 and 0.97 respectively for responses of '*partial'* to '*no*' autonomy and '*strong*' to '*partial'* autonomy, compared with households sized '*below average*'. Similarly, regarding '*above average*' sized households, it appears autonomy is further decreased to 0.60 and 0.66 times lower odds respectively of '*partial*' to '*no*' responses and '*strong*' to '*partial*' responses, compared with households sized '*below average*'. These results are statistically significant at the 1 precent level of confidence. Results from urban regions (*Panel-II*) are consistent with the overall evidence we have already observed, apart from the statistically insignificant association of '*average*' size to responses of '*strong*' compared to '*partial*' autonomy. Interestingly, the results from the rural regions (*Panel-III*) are consistent with results from the urban regions regarding all formulations of household size.

Along similar lines, household size which excludes the component of children (elderly persons and relatives of husband only) appears to have an inverse effect on women's autonomy in the household. Table 7.1.1 (*Panel-I*) shows that even the '*average*' sized household decreases by 0.61 and 0.83 times lower odds of '*partial*' to '*no*' autonomy, and '*strong*' to '*partial*' autonomy of women, in the overall sample. Similarly, the size '*above average*' further lowers the odds of '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy by 0.51 and 0.63 times respectively in the overall sample. These results are highly significant statistically. Similar trends are found in the urban regions (*Panel-II*) apart from the '*average*' size households which appear statistically insignificant in the '*strong*' to the '*partial*' categories. However, the results from the rural regions (*Panel-III*) are consistent with the findings from the overall sample.

The above results clearly indicate that household size plays a role in determining the level of women's autonomy in the household. The increasing number of people in a household, in terms of elderly parents or the relatives of husband, substantially decreases women's autonomy in the household. Conversely, it does not imply that a woman with less autonomy has relatively less household responsibilities. On the contrary, a woman may be expected to serve the household or all members of the household with the best of intentions and demonstrate the utmost loyalty towards the family and relatives of her husband. This appears consistent with the existing traditions and cultural norms of society. These findings encourage further investigation into the role of the family system with regards to women's autonomy in the household. Accordingly, we classify the data into nuclear and extended family systems to capture this effect. These formulations are not clearly presented in the theoretical framework of analysis in Chapter

3, yet we consider this aspect relevant to the overall analysis and therefore include it in the set of threat options of women.

Therefore, we attempt to examine the effect of extended family systems relative to the nuclear family system on women's autonomy in the household. Table 7.1 (*Panel-I*) illustrates within the overall sample, that households with extended family systems have 0.70 times lower odds to have '*partial*' as opposed to '*no*' autonomy responses, a statistically significant result at the 1 per cent level of confidence. However, the comparative odds regarding '*strong*' to '*partial*' autonomy are not statistically significant. Similarly, results for extended family households in the urban regions (*Panel-II*) show lower odds of 0.60 in the '*partial*' to '*no*' categories. Interestingly, the extended family systems relative to nuclear family systems does not appear to have an influence on women's autonomy in rural regions (*Panel-III*). It implies that within rural regions, family formation, whether nuclear or extended, does not have an effect on any level of women's autonomy. This observation corresponds with the more conventional way of living in rural regions where women are generally observed to hold lower levels of decision-making power in the household. Relevant to this discussion is the evaluation of the effect a mother-in-law may have on the decision-making power of a woman in the household. The results (*Panel-I* through *Panel-III*) show that the presence of a woman's mother-in-law appears with 0.17, 0.10 and 0.20 times lower odds of '*partial*' to '*no*' autonomy respectively from all samples; overall, urban and rural. In summary, we witness that increasing the size of a household, having an extended family system and the presence of a woman's mother-in-law all substantially decrease women's autonomy, particularly from levels of '*partial*' to '*no*' autonomy. However, results from the rural regions show that the extended family system may not affect women's autonomy in the household. These results indicate the prevalence of cultural or more traditional behaviours of society in the context of women's inclusion in economic decision-making spheres in the household.

The third aspect of household size, and another threat option, is used to explain women's autonomy in the household, namely, the number of children present. For this purpose we devise various formulations of the number of children, and investigate the relevance to women's autonomy. These formulations consist of different combinations of the children's gender and numbers of each gender, tested against women's autonomy. These formulations are: ***i)*** one child (boy/girl) as a reference category versus no child and children of both genders; ***ii)*** no child as a reference category versus only boy, girl and both genders; ***iii)*** no child as a reference category versus only boys, only girls, equal number of boys and girls, number of girls greater than boys and boys greater than girls and ***iv)*** equal number of boys and girls as a reference category versus only boys, only girls, girls greater than boys and boys greater than

girls. Using these different formulations we illustrate the results respectively in Table 7.1.1 through to Appendix Table 7.1.5[9] for the overall as well as urban and rural regions.

Table 7.1.1(*panel-I*) shows that in the overall sample, having '*no child*' relative to '*one child*' (any gender) gives 0.82 times lower odds of '*partial*' to '*no*' autonomy. Conversely, '*children*' (both genders) relative to '*one child*' has no impact on increasing levels of autonomy in the household from the overall sample. In the urban regions, however, we witness that '*no child*' relative to '*one child*' shows 0.75 times lower odds of '*partial*' to '*no*' autonomy but insignificant results regarding '*strong*' to '*partial*' autonomy. Similarly, we find '*no child*' has 0.75 times lower odds of '*partial*' to '*no*' autonomy, however, '*children*' (both genders) has 1.29 times greater odds of '*partial*' to '*no*' autonomy in urban regions (*Panel-II*). Interestingly, we fail to observe any significance between '*no children*' or '*children*' (both genders) relative to '*no children*' in association with any level of autonomy from rural regions (*Panel-III*).

Table 7.1.2 corresponds to the specification where '*no child'* is the reference category in order to investigate whether '*only boys*', '*only girls*' and '*children*' (both genders) are indicative of autonomy levels. Results from the overall sample (*Panel-I*) show that '*only boys*', '*only girls*' and '*children*' (both genders) relative to '*no child'* correspondingly result in 1.21, 1.24 and 1.30 times greater odds of '*partial*' to '*no*' autonomy in the household. However, these results are not found to be consistent with the evidence from the '*strong*' to '*partial*' autonomy in the overall sample. Furthermore, results from the urban regions (*panel-II*) only support the finding that '*children'* (both genders) increases the odds by 1.71 times greater of '*partial*' to '*no*' autonomy. However, results from the rural region do not support any of these findings indicating a significant influence on women's autonomy (*Panel-III*).

Similarly, Table 7.1.3 presents results of further specifications where having '*only boys*', '*only girls*', '*equal number of boys and girls*' or having '*greater numbers of one gender over the other*' relative to '*no child*' in association with women's autonomy in the household. The results from the overall sample (*Panel-I*) show that '*only boys*', '*only girls*', '*equal number of boys and girls*' or having '*greater numbers of one gender over the other*' relative to '*no child*' increases the odds by 1.22, 1.25, 1.22, 1.38, 1.35 of having '*partial*' to '*no*' autonomy in the household. Similarly, having '*equal number of boys and girls*' or having '*greater numbers of one gender over the other*' relative to '*no child*' show respectively 1.56, 1.81 and 1.85 times greater odds of '*partial*' to '*no*' autonomy in the household from urban regions (*Panel-II*). However, results from the rural regions indicate these specifications are statistically insignificant on any level of women's autonomy in the (*panel-III*).

[9] Appendix Table 7.1.2 to Appendix Table 7.1.5 are presented in Appendix-II: Determinants of women's autonomy in aggregate economic decision-making.

Table 7.1.4 presents the last specification in which '*equal number of boys* and *girls*' is considered as the reference category, in comparison with '*no child*', '*only boys*', '*only girls*' and '*greater numbers of one gender over the other*'. The results from the overall sample show that having '*no child'* compared with the reference category lowers the odds to 0.82 times for '*partial*' to '*no*' autonomy, however, all other categories show statistical insignificant effects on any level of autonomy. These results are consistent with the evidence from the urban regions (*Panel-II*). Furthermore, consistent with earlier specifications, evidence from the rural regions does not support the number or gender of children as having an influence on women's autonomy in the household. In a further specification presented in Table 7.1.5 where '*girls greater than boys*' is considered as the reference category relative to '*no child*', lower odds of 0.75 and 0.55 times respectively were found for '*partial'* to '*no*' autonomy from the overall and urban regions respectively. The specification also confirms that number or the gender of children does not support evidence of increasing levels of women's autonomy in rural regions.

In conclusion, we find that increasing numbers of children regardless of their gender, increases the odds of women's '*partial*' autonomy but lacks relevancy on levels of '*strong*' autonomy in the overall sample as well as the urban regions. Further, we find that having an equal number of boys and girls also appear significant to increasing women's autonomy in the household. However, the number of children or their gender does not appear relevant in influencing women's autonomy in rural regions. This may imply the existence of strong cultural or traditional traits of constrained women's autonomy in these areas, also evidenced by the common practice of males having multiple wives at the same time, regardless of the number of children from a previous wife.

7.3. Individual Characteristics and Autonomy in Economic Decision-making

A woman's individual characteristics require investigation into the level of her education, her age, as well as her male partner's level of education and income. We observe the effect of a woman's education using four main classifications: ***i)*** '*no education'* as the reference category versus '*5-years'*, '*10-years'*, '*12-years*' and '*higher levels of education*'; ***ii)*** '*no education'* (never attended school) as a reference category to '*education'* (one year school or above); ***iii)*** education considered as a continuous variable ranging from '*no school*' to the maximum number of years attending the school and finally, ***iv)*** '*no education'* as a reference category and '*5-years'* of schooling, '*5-years'* versus '*10 years*' of schooling, '*10-years*' versus '*12-years*' of schooling and '*12-years*' versus '*higher levels of schooling*'. It is appropriate to note that we present results of the first specification only but discuss results of all of the above categories.[10]

[10] We are unable to fit all information into the single table for comparative purposes, however, the results are available on request.

Again we refer to Table 7.1 which presents results of the first category of specification for the effect of '*5-years'* schooling through to '*higher levels of education*' compared with the reference category of '*no education'*. Results show that '*5-years'* of schooling relative to '*no education'* generates greater odds of 1.24 and 1.35 times that of '*partial*' to '*no*' autonomy and '*strong'* to '*partial*' autonomy respectively in the overall sample. Similarly, education of '*8-years*' through to '*higher levels of education*' compared with '*no education'* depict respectively 1.74, 1.42 and 1.88 times greater odds of '*partial'* to '*no*' autonomy from the overall sample. Results from urban regions (*Panel-II*) show that only '*8-years'* of schooling and '*higher levels of education*' correspondingly reflect 1.50 and 1.59 times greater odds of '*partial'* to '*no*' autonomy in the household. However, we witness that each of the education categories, including '*5-years'* through to '*higher levels of education*' respectively appear with 1.26, 1.69, 1.45 and 1.65 times greater odds of '*partial'* to '*no*' autonomy from rural regions (*panel-III*). Further, we also observe that '*5-years'* schooling and '*12-years*' schooling show 1.57 and 1.60 times greater odds of '*strong'* to '*partial*' autonomy in rural areas.

Regarding the specification where we investigate the effect of the category '*education*' relative to '*no education'*, results show that '*education'* appears with respectively 1.44 and 1.22 times greater odds of '*no'* to '*partial*' and '*partial*' to '*strong*' autonomy in the household from the overall sample. Further the results of '*education'* versus '*no education*' show 1.26 times greater odds of only '*partial'* to '*no*' autonomy from urban regions. Furthermore, the results of '*education'* relative to '*no education*' depict 1.39 and 1.49 times greater odds of '*partial'* to '*no*' and '*strong*' to '*partial*' autonomy in rural households. Similarly, in accordance with the earlier specification where education appears as a continuous variable, we observe that every additional year of education increases the odds by 1.05 and 1.02 times of '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy in the overall sample. Correspondingly, results for the urban regions show increased odds of 1.03 of '*partial*' to '*no*' autonomy in the household. Further, the results show that for each additional year of education, there's a corresponding increase in odds of 1.05 and 1.05 times for '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy from the rural regions. Finally, we look at the fourth specification in which we investigate any variations based on increasing successive levels of education. Interestingly, we do not find any support for the proposition that for each successive level of education, there is a greater level of autonomy compared with the preceding level of education, the exception being when compared with '*no education'*. The above results show the following interesting findings: ***i)*** a woman with any level of education enjoys a relatively greater level of autonomy in the household compared with women with no education; ***ii)*** in urban regions, the effect of education only increases the '*partial'* to '*no*' autonomy responses, but has an insignificant impact on '*strong*' to '*partial*' autonomy, however ***iii)*** results from the rural regions show that women's education levels are relevant to their level

of autonomy with statistically significant results for '*partial'* to '*no*' and '*strong*' to '*partial'* autonomy responses.

A woman's age is another characteristic which is usually considered an important determinant of women's autonomy in the household. We construct two main classifications of age to investigate this effect on women's autonomy. The first specification treats the '*15-19 years*' age bracket as a reference category compared with six successive age brackets. The second specification considers age as a continuous variable from the minimum of 15 years to the maximum of 49 years of age. Table 7.1 shows the results of different successive age brackets compared with the immediately preceding age bracket as a reference category. The results show that all successive age categories from '*25-29 years*' through to '*45-49 years*' compared with the base category of '*15-19 years*' demonstrate substantial increases in women's autonomy of '*partial*' to '*no*' and '*strong*' to '*partial*' responses in the overall sample. The results also indicate that the highest two categories, '*40-44 years*' and '*45-49 years*' age brackets, compared to the age bracket of '*15-19 years*' show greater odds of '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy respectively from the urban regions. However, evidence from the rural regions depicts that in each of the higher age brackets, there is an increase in '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy in the household. According to the second specification[11] we witness that for each additional age bracket, there is a corresponding increase in odds, namely, 1.04 and 1.03 times of '*no*' to '*partial*' and '*partial*' to '*strong*' autonomy from the overall sample. Similarly, from the urban regions we find each of the additional age brackets correspond to increased odds of 1.05 and 1.03 times for '*no*' to '*partial*' and '*partial*' to '*strong*' autonomy in the household. Similar results were found for the rural regions. Overall evidence points to the correlation between increasing age and heightened levels of women's autonomy in both urban and rural regions. This may be attributable to the likelihood that as a woman ages, she gradually adopts and adjusts to the traditions of that family including those of her husband's parents and other relatives living together in the household. Over time this may further assist a woman to achieve a greater degree of autonomy within the household decision-making sphere.

Similar to a woman's level of education, we also investigate her husband's level of education to determine what effect, if any, it has on the levels of her autonomy in the household. We construct the following three classifications of a husband's education level:[12] ***i)*** '*no education'* as a reference category compared with each successive category including '*5-years'* schooling through to '*higher levels of education*'; ***ii)*** '*no education'* as the reference category compared to any level of education and ***iii)*** the effect of every additional year of education.

[11] Results available on request.
[12] Results available on request.

Table 7.1 shows that any level of a husband's education compared with '*no education'* does not appear associated with any level of a woman's autonomy, in the overall sample as well as the urban and rural regions. These findings were also found during analysis of the second and third specifications.

We also look at a husband's financial health to investigate its relationship to a woman's autonomy in the household. We classify a husband's income into three main levels; '*low*', '*middle*' and '*high*'. For analytical purposes we treat the '*low*' category as a reference to compare it with '*middle*' and '*high*' income levels. Interestingly, results show that the '*middle*' level of income compared with '*low*' income has 1.33 times greater odds of '*partial*' to '*no*' autonomy from the overall sample. Similarly, '*high*' levels of income compared with '*low*' levels led to greater odds of 1.59 of '*no*' to '*partial*' autonomy from the overall sample. Similar results are observed from the urban regions. However, in the rural regions we witness that only the '*middle*' level of income in comparison to the '*low*' income group shows 1.21 times greater odds of '*no'* to '*partial*' autonomy of women in the household.

7.4. Family Income Status and Economic Decision-making Autonomy

Family income status consists of the level of household consumption based on the household's joint financial resources.[13] This indicator also reflects a household's socioeconomic status and may play some role in determining women's autonomy in the household. Family income is classified into three groups, '*low*', '*middle*' and 'high'. We investigate if the '*middle*' and/or '*high*' groups, relative to the '*low*' group results in greater autonomy for women in the household. Table 7.1 shows that families grouped in the '*high*' income status compared with those in the '*low*' group result in 1.09 and 1.10 times greater odds, respectively of '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy in the overall sample. Similarly, we observe that '*high*' family income levels compared with '*low*' family income levels have greater odds of 1.11 and 1.26 times of '*partial*' to '*no*' autonomy and '*strong'* to '*partial*' autonomy in the urban regions. However, variations between the '*middle*' income group and '*low*' income group are statistically insignificant regarding any level of autonomy. Likewise, within the rural regions, family income status is not significantly linked to women's levels of autonomy.

7.5. States/Provincial Effects and Autonomy in Economic Decision-making

It has been generally noticed that women from different states/provinces of Pakistan display different degrees of autonomy, dependent perhaps on the strong cultural, traditional and historical backgrounds of each province. Furthermore, these differences may also be linked with urbanisation and economic opportunities available in each of the provinces. The province of

[13] For a further description see Chapter 4.

Punjab is generally considered multiethnic, economically developed, with a relatively high literacy rate and greater prosperity compared with the other three provinces. Therefore, we consider Punjab as a reference category and compare the other three provinces individually to observe any variations in women's autonomy. Table 7.1 shows that the province of Sindh compared with Punjab reflects 0.80 and 0.34 times lower odds, respectively, of '*partial*' to '*no*' and '*strong*' to '*partial* autonomy in the household from the overall sample. Within these areas, the results also show 0.48 times lower odds of '*strong'* to '*partial*' autonomy from the urban regions. However, results from the rural regions show 0.60 and 0.16 times lower odds, respectively, of '*partial'* to '*no*' and '*strong*' to '*partial*' autonomy of Sindh compared with the province of Punjab. Accordingly, the comparison of NWFP with the province of Punjab shows 0.73 and 0.37 times lower odds, respectively, of '*partial'* to '*no*' autonomy and '*strong*' to '*partial*' autonomy from the overall sample. Within these areas, however, the urban regions show 0.25 times lower odds of '*strong'* to '*partial*' autonomy. Conversely, results for the rural regions of Sindh, compared with Punjab, show 0.65 and 0.41 times lower odds of '*partial'* to '*no*' autonomy and '*strong'* to '*partial*' autonomy. Regarding the third province of Baluchistan, results show 0.11 and 0.28 times lower odds, respectively, of '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy from the overall sample. Similarly, from the urban regions we find 0.20 and 0.12 lower odds of '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy. Likewise the rural region depicts 0.09 and 0.35 lower odds of '*partial*' to '*no*' and '*strong*' to '*partial*' autonomy.

7.6. A Note on Endogeneity

There is always suspicion of endogeniety existing in research areas similar to this study. Some prominent studies such as Pollak (2005), Basu (2006), Anderson and Eswaran (2009) and Eswaran and Malhotra (2011) on similar areas of research indicate the possibility of a two-way causality between women's autonomy and corresponding determinants. This requires investigation of proper instruments to overcome the issue of endogeniety. Therefore, in this thesis, we address the issue by providing three arguments within the context of women's autonomy in Pakistan.

The first argument refers to the fact that all determinants are considered to be exogenous variables in the empirical settings. As observed, the determinants include the threat options of employment status, size of the household, and gender and number of children as a sub-component of the household size. The other common determinants include individual specific characteristics, for example age, educational level, family socio-economic health and geographic locations. It is crucially important to note that the sample includes only married women in the empirical analysis. It implies that the threat options or the individual characteristics which might be subject to subject to the problem of potential simultaneity are

usually decided before to marriage. Therefore, women may have little chance to improve their threat options or embedded characteristics after marriage. This is also confirmed from the available data utilised in this study. We could not find a single instance where a woman altered her level of threat option or the capacity of her individual characteristics, a feature also common in the larger context of conventional society. Contrarily, if we believe that a woman may acquire skills to earn an independent income, and receive further education after her marriage, then the issue of autonomy issue probably would not exist. According to this rationale there would therefore exist cooperation and a balance of power between men and women within all aspects of decision-making spheres in the household.

The second argument refers to the construction of a new variable for women, 'intrinsic autonomy', and investigates whether this could lead to women's increased decision-making power by receiving further education or working outside of the household for an independent income. The variable of 'intrinsic autonomy' refers to women with '*strong*' autonomy status from the given sample of married women. We consider that women with '*strong*' autonomy display greater degrees of association with their specific characteristics of education and employment. In this study, however, we observed an insignificant correlation between women's intrinsic autonomy and their individual characteristics.

The third argument draws our attention towards all alternative specifications of autonomy models discussed earlier. As shown, we produced estimations of each of the above five dimensions of autonomy, subject to different formulations of one of the threat options regarding the number and gender of children. Interestingly, we observed that the results of threat options and individual characteristics remain consistent throughout all of the five different specifications corresponding to each dimension of autonomy. This provides the impression that the above identified determinants are exogenous in nature in the specific context of a traditional society. In addition to the above arguments we plan to further investigate the issue of endogeniety as a separate research project by acquiring sufficient data information on various relevant aspects. The relevant aspects could be acquiring information on more than one such like surveys used in this thesis and if possible to capture some relevant information on women regarding their pre-marital characteristics.

7.7. Concluding Remarks

We discussed the evidence of threat options, individual characteristics, family socio-economic status and state/province to explain the multilevel concept of women's autonomy in economic decision- making aspects in the household for the overall, urban and rural region samples. We also compared results obtained through the conventional ordered logit model and the extended multinomial logit model to observe the differences. We found that the multinomial logit model is a more appropriate model for this analysis given the conventional ordered logit model failed

to satisfy the fundamental assumption of proportionality. Therefore, the results based on the multinomial logit methodology suggest varying effects of determinants on the multilevel measures of autonomy.

In relation to threat options, we find that employed (earned income) woman relative to unemployed woman are more likely to have greater levels of autonomy in the household from both the urban and rural regions. More specifically, results indicate that an earned income increases levels of '*partial*' to '*strong*' autonomy in the urban regions, and '*no*' to '*partial*' autonomy in the rural regions. The results are consistent with findings in existing literature that link women's employment to increased autonomy. However, existing literature ignores the relative change among different levels of autonomy corresponding to the effects of an earned income. This study, however, differentiates the relevancy of an earned income in association with '*no*', '*partial*' and '*strong*' autonomy. We also find that an '*above average*' household size substantially decreases women's autonomy in both the urban and rural regions. Furthermore, disaggregation of the household size (refers to family composition) suggests that the other component of size (consisting of elderly persons and relatives of a husband) decreases women's autonomy in the household. We find that increasing the number of children increases '*no*' to '*partial*' autonomy but appears irrelevant to '*strong*' autonomy in both the overall and the urban regions. Interestingly, we find that the gender of children does not appear to influence any level of women's autonomy across both regions. Obviously, these conclusions can be linked with the dominant cultural norms of this society.

Finally, regarding individual characteristics, we find that some level of education does provide greater autonomy to women in the household compared with relatively less education or none at all. We also observed education to be more sensitive in determining women's autonomy in the rural regions. Similarly, we find that a woman's increasing age also increases her autonomy. We were unable to find supporting evidence linking a woman's levels of autonomy to her husband's level of education, in both the urban and rural regions. A husband's income status, however, appears positively associated with his wife's level of autonomy. The socio-economic status (high income group) of a family appears to also have a positive impact on a woman's autonomy compared with low income groups from urban as well as rural regions. The results also suggest that women from the provinces of Sindh, NWFP and Baluchistan show relatively less autonomy in comparison with women from the province of Punjab during this period of time.

Table 7.1: Determinants of Women's Autonomy in Economic Decision-making

		Panel-I: Overall						***Panel-II: Urban Region***						***Panel-II: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.47	0.00	1.63	0.00	1.20	0.09	1.63	0.00	1.17	0.50	1.63	0.00	1.39	0.00	1.81	0.00	1.02	0.87
Household Size	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.84	0.02	0.77	0.00	0.97	0.03	0.84	0.02	0.76	0.01	0.91	0.57	0.84	0.07	0.77	0.02	1.01	0.95
	Above Average	0.56	0.00	0.60	0.00	0.66	0.00	0.56	0.00	0.49	0.00	0.79	0.04	0.56	0.00	0.65	0.00	0.60	0.00
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.74	0.00	0.70	0.00	0.86	0.17	0.76	0.01	0.60	0.01	0.91	0.45	0.71	0.00	0.73	0.11	0.80	0.15
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.20	0.00	0.17	0.00	0.93	0.90	0.11	0.01	0.10	0.01	0.49	0.58	0.27	0.00	0.20	0.00	1.37	0.63
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.30	0.12	1.24	0.18	1.20	0.39	1.18	0.41	1.08	0.78	1.15	0.70	1.38	0.02	1.33	0.14	1.26	0.40
	25-29 years	1.91	0.00	1.63	0.00	1.71	0.12	1.98	0.00	1.95	0.11	1.39	0.36	1.91	0.00	1.54	0.10	1.95	0.02
	30-34 years	2.47	0.00	1.85	0.00	2.26	0.00	2.79	0.00	2.04	0.16	2.16	0.12	2.31	0.00	1.78	0.00	2.24	0.01
	35-39 years	3.16	0.00	2.60	0.00	2.43	0.00	2.95	0.00	2.90	0.00	1.88	0.18	3.26	0.00	2.47	0.00	2.77	0.00
	40-44 years	3.72	0.00	2.84	0.00	2.84	0.00	3.62	0.00	3.02	0.00	2.38	0.02	3.64	0.00	2.69	0.00	3.02	0.00
	45-49 years	3.44	0.00	3.02	0.00	2.49	0.00	3.49	0.00	3.03	0.00	2.26	0.03	3.36	0.00	3.01	0.00	2.46	0.00
Women's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.38	0.00	1.24	0.02	1.35	0.00	0.99	0.91	1.11	0.51	0.95	0.69	1.55	0.00	1.26	0.06	1.57	0.00
	8-years education	1.24	0.05	1.74	0.00	0.92	0.62	0.84	0.26	1.50	0.05	0.61	0.03	1.53	0.01	1.69	0.01	1.21	0.35
	10-12years education	1.41	0.00	1.42	0.01	1.28	0.07	0.96	0.78	1.14	0.48	0.89	0.53	1.66	0.01	1.45	0.08	1.60	0.03
	Higher education	1.51	0.00	1.88	0.00	1.18	0.24	0.99	0.94	1.59	0.05	0.77	0.14	1.74	0.03	1.65	0.11	1.48	0.27

continue …

Table 7.1(…continued): Determinants of Women's Autonomy in Economic Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.94	0.34	0.96	0.58	0.94	0.46	1.04	0.74	1.00	1.00	1.04	0.79	0.91	0.21	0.96	0.64	0.88	0.24
	8-years education	0.99	0.88	0.94	0.53	1.03	0.79	1.03	0.85	1.06	0.73	0.97	0.88	0.93	0.50	0.88	0.31	1.01	0.97
	10-12years education	0.94	0.39	0.91	0.33	0.98	0.86	1.02	0.90	1.16	0.35	0.90	0.53	0.89	0.26	0.82	0.10	1.01	0.92
	Higher education	0.98	0.82	0.92	0.49	1.05	0.67	1.06	0.66	0.98	0.89	1.11	0.55	0.94	0.59	0.94	0.65	0.96	0.84
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.29	0.00	1.33	0.00	1.15	0.17	1.31	0.00	1.39	0.01	1.15	0.21	1.20	0.01	1.21	0.02	1.10	0.36
	High income	1.62	0.00	1.33	0.19	1.59	0.01	1.73	0.00	1.16	0.62	1.81	0.00	1.54	0.08	1.58	0.18	1.25	0.50
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.06	0.07	1.04	0.68	1.05	0.61	1.23	0.06	1.12	0.54	1.18	0.32	0.99	0.87	1.01	0.93	0.97	0.83
	High income	1.13	0.09	1.09	0.09	1.10	0.06	1.28	0.07	1.11	0.08	1.26	0.08	0.99	0.86	1.03	0.80	0.96	0.72
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.45	0.00	0.80	0.03	0.34	0.00	0.65	0.00	1.35	0.11	0.48	0.00	0.31	0.00	0.60	0.00	0.16	0.00
	NWFP	0.45	0.00	0.73	0.03	0.37	0.00	0.48	0.00	1.19	0.48	0.25	0.00	0.43	0.00	0.65	0.01	0.41	0.00
	Baluchistan	0.07	0.00	0.11	0.00	0.28	0.00	0.09	0.00	0.20	0.00	0.12	0.00	0.06	0.00	0.09	0.00	0.35	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; LR chi2 (26) = 3828.22; Prob > chi2 = 0.0000; Log likelihood = -12065.335; Pseudo R2 = 0.1369. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 202.01 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; Design df = 1101; F (52, 1050) = 14.43; Prob > F = 0.00.*

Panel-II: this panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df=527; F(26, 502)=13.04, P > F = 0.00. Pseudo R2 = 0.1369. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 202.01 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df = 527; F(52, 476) = 7.35; Prob > F = 0.00.*

Panel-III: this panel refers to results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 527, F(26, 549) = 21.34, P>F=0.00. Pseudo R2 = 0.1369. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 202.01 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574; F (52,523) = 10.15; Prob > F = 0.00*

Table 7.1.1: Determinants of Women's Autonomy in Economic Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.43	0.00	1.57	0.00	1.18	0.13	1.60	0.00	1.12	0.64	1.61	0.00	1.34	0.00	1.75	0.00	1.00	1.00
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.67	0.00	0.61	0.00	0.83	0.04	0.70	0.00	0.51	0.00	0.92	0.51	0.66	0.00	0.66	0.00	0.77	0.05
	Above Average	0.50	0.00	0.51	0.00	0.63	0.00	0.51	0.00	0.40	0.00	0.72	0.01	0.49	0.00	0.56	0.00	0.57	0.00
Household Size: Children	Boy/Girl	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No child	0.85	0.05	0.82	0.03	0.98	0.84	0.74	0.04	0.75	0.09	0.80	0.30	0.95	0.59	0.86	0.20	1.14	0.39
	Boys/Girls (both)	1.11	0.07	1.06	0.38	1.13	0.14	1.25	0.03	1.29	0.06	1.08	0.53	1.04	0.63	0.99	0.88	1.13	0.25
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.83	0.01	0.80	0.04	0.90	0.25	0.80	0.07	0.70	0.07	0.93	0.61	0.82	0.04	0.83	0.16	0.87	0.25
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.18	0.00	1.06	0.92	0.10	0.00	0.11	0.01	0.50	0.58	0.32	0.00	0.22	0.00	1.66	0.42
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.11	0.35	1.07	0.58	1.07	0.74	0.95	0.80	0.86	0.60	1.02	0.96	1.25	0.10	1.20	0.19	1.17	0.59
	25-29 years	1.44	0.00	1.26	0.09	1.41	0.13	1.32	0.20	1.28	0.37	1.11	0.76	1.57	0.00	1.29	0.10	1.68	0.08
	30-34 years	1.68	0.00	1.28	0.11	1.74	0.02	1.64	0.04	1.14	0.67	1.64	0.17	1.74	0.00	1.37	0.08	1.79	0.06
	35-39 years	2.16	0.00	1.80	0.00	1.87	0.01	1.80	0.01	1.69	0.08	1.44	0.31	2.43	0.00	1.90	0.00	2.18	0.01
	40-44 years	2.88	0.00	2.22	0.00	2.38	0.00	2.53	0.00	2.07	0.04	1.98	0.06	3.06	0.00	2.29	0.00	2.63	0.00
	45-49 years	2.90	0.00	2.53	0.00	2.22	0.00	2.65	0.00	2.21	0.02	1.95	0.07	3.09	0.00	2.74	0.00	2.34	0.01
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.40	0.00	1.25	0.02	1.38	0.00	1.01	0.91	1.16	0.35	0.97	0.80	1.56	0.00	1.26	0.06	1.59	0.00
	8-years education	1.27	0.03	1.75	0.00	0.94	0.72	0.86	0.33	1.54	0.05	0.62	0.03	1.56	0.00	1.72	0.01	1.25	0.28
	10-12years education	1.46	0.00	1.48	0.00	1.31	0.05	0.99	0.96	1.21	0.31	0.90	0.56	1.75	0.00	1.51	0.05	1.66	0.02
	Higher education	1.60	0.00	2.01	0.00	1.24	0.14	1.07	0.66	1.80	0.01	0.79	0.21	1.82	0.02	1.72	0.09	1.59	0.19

continue …

Table 7.1.1(…continued): Determinants of Women's Autonomy in Economic Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-II: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.43	0.97	0.71	0.95	0.57	1.04	0.76	0.98	0.90	1.05	0.74	0.93	0.30	0.98	0.83	0.89	0.31
	8-years education	1.00	0.97	0.95	0.61	1.05	0.70	1.04	0.78	1.07	0.71	0.99	0.94	0.94	0.58	0.89	0.36	1.03	0.84
	10-12years education	0.96	0.57	0.93	0.47	1.00	0.98	1.06	0.64	1.21	0.25	0.92	0.62	0.91	0.34	0.83	0.14	1.03	0.83
	Higher education	1.00	1.00	0.95	0.66	1.08	0.56	1.12	0.43	1.04	0.83	1.15	0.42	0.94	0.63	0.95	0.73	0.96	0.83
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.19	0.00	1.22	0.00	1.09	0.22	1.16	0.09	1.21	0.09	1.09	0.46	1.13	0.07	1.14	0.10	1.05	0.61
	High income	1.56	0.00	1.26	0.30	1.56	0.01	1.57	0.02	1.05	0.89	1.70	0.01	1.54	0.09	1.52	0.22	1.30	0.43
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.04	1.12	0.19	1.12	0.25	1.35	0.03	1.26	0.23	1.24	0.19	1.07	0.40	1.07	0.47	1.04	0.72
	High income	1.33	0.00	1.27	0.01	1.24	0.02	1.55	0.00	1.40	0.05	1.37	0.03	1.14	0.12	1.15	0.17	1.07	0.56
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.44	0.00	0.79	0.02	0.34	0.00	0.63	0.00	1.30	0.11	0.47	0.00	0.31	0.00	0.60	0.00	0.16	0.00
	NWFP	0.43	0.00	0.71	0.02	0.36	0.00	0.45	0.00	1.10	0.69	0.24	0.00	0.42	0.00	0.63	0.01	0.40	0.00
	Baluchistan	0.07	0.00	0.11	0.00	0.26	0.00	0.08	0.00	0.18	0.00	0.12	0.00	0.06	0.00	0.09	0.00	0.35	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; LR chi2 (29) = 3876.63; Prob > chi2 = 0.00; Log likelihood = -12041.13; Pseudo R2 = 0.1389. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 200.67 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; Design df = 1101; F (56, 1040) = 14.16; Prob > F = 0.00.*

Panel-II: this panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df=527; F(28, 500)=13.53, P > F = 0.00. Pseudo R2 = 0.1389. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 200.67 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df = 527; F(56, 472) = 7.45; Prob > F = 0.00.*

Panel-III: this panel refers to results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574, F(28, 547) = 19.78, P>F=0.00. Pseudo R2 = 0.1389. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 200.67 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574; F(56,519) = 9.53; Prob > F = 0.00*

CHAPTER 8

ECONOMIC DECISION-MAKING AUTONOMY: DISAGGREGATED ANALYSIS

8.1. Introduction

This Chapter presents the analysis of various determinants of economic decision-making from the perspective of different sub-dimensions of autonomy. The sub-dimensions as specified in Chapter 4 include women's decision-making in purchases of daily food items, clothing and footwear, recreational and independent travel and medical treatment. It is appropriate to note that we replicate estimations of each of the sub-dimensions of autonomy along similar lines as results presented in Chapter 7. Therefore, this Chapter is divided into four sections corresponding to results for each of the sub-dimensions of women's autonomy. We present results of the ordered logit and multinomial logit settings for the overall sample as well as the urban and rural regions.

8.2. Food-related Decision-making Autonomy

Women's food-related decision-making autonomy is one of the key components of the aggregate economic autonomy index in the household and refers in particular to the purchase of food-related items for herself and the family. It may be relevant to note that we first apply a conventional ordered logit model which was previously rejected based on reasons pointed out in Chapter 7. Therefore, we attempt to estimate the multinomial logit settings in the perspective of '*no'* to '*partial'* autonomy' and '*partial'* to '*strong'* autonomy' to investigate the varying effects of each of the determinants of sub-dimensions in this sphere.

Table 8.1 *(Panel-I*) at the end of this Chapter shows that in the overall sample, women with an earned income have 1.45 and 1.36 times greater odds of having '*partial'* over '*no'* autonomy and '*strong'* over '*partial'* autonomy. Similarly, we find that employed women have 1.64 and 1.49 times greater odds of having '*no*' to '*partial'* autonomy and '*partial'* to '*strong'* autonomy in the rural regions (*Panel-III*). However, the results from the urban regions reveal there is a statistically insignificant association between earned income and food-related autonomy. The above results indicate a regional divide which modifies the overall effect of increasing '*no*' to '*partial'* and '*partial'* to '*strong'*.

Table 8.1 (*Panel-I*) shows that increasing household size in any combination significantly decreases women's food-related decision-making autonomy in the household, evident from the overall sample as well as urban and rural regions. Further, household size

which includes elderly persons and relatives of the husband (which includes elderly persons and relatives of the husband but excludes children) appears to be inversely associated with women's autonomy. Table 8.1.1 (*Panel-I*) shows that the '*average*' sized household decreases the odds by 0.61 times for *'partial'* to '*no*' autonomy in the overall sample. Similarly, being a household of '*above average*' further decreases the odds by 0.37 and 0.73 times for of *'partial'* to '*no*' and *'strong'* to *'partial'* autonomy in the overall sample. These results are statistically significant at the 1 per cent level of confidence. Within the urban regions (*Panel-II*), results demonstrate a similar inverse association between increasing a household size and the level of women's autonomy. Similarly, the extended family system lowers the odds by 0.68 times for *'partial'* to '*no*' autonomy from the overall sample, statistically significant at the 1 per cent level of confidence (*Panel-I*). Extended family systems within the urban areas also lower the odds by 0.60 times for *'partial'* to '*no*' autonomy (*Panel-II*). Interestingly, within the rural areas, the extended family system relative to the nuclear family system does not appear to influence women's autonomy (*Panel-III*). Furthermore, the results (Table 8.1 *Panel-I* through *Panel-III*) reveal that the presence of a mother-in-law lowers the odds by 0.64, 0.70 and 0.51 times respectively for *'partial'* to '*no*' autonomy for the overall, urban and rural samples. Generally the findings consistently show that an increasing household size, an extended family system and the presence of a mother-in-law all substantially decrease women's autonomy, particularly from *'partial'* to '*no*' autonomy. Results from the rural regions, however, show that the extended family system has little effect.

Regarding the number of children and the level of autonomy regarding decisions of food-related purchasing, we reproduce results along similar lines as observed in the aggregate economic decision-making aspects of women in Chapter 7. Therefore, Table 8.1.2 through Appendix Table 8.1.5[1] presents results of different formulations[2] of children in association with the above measure of women's autonomy from an overall as well as urban and rural perspective.

Table 8.1.1(*Panel-I*) at the end of this chapter, shows that *'no child'* relative to only '*one child'* (any gender) depicts 0.78 times lower odds of *'partial'* to '*no*' autonomy from the overall sample. On the other hand *'children'* (both genders) relative to '*one child'* reveals there is no impact on increasing the level of women's autonomy in the overall sample. From the urban regions (*Panel-II*), however, we witness that *'no child'* relative to '*one child'* lowers the odds by 0.68 times for *'partial'* to '*no*' autonomy but is insignificant regarding *'strong'* to ''*partial''* autonomy. Conversely, we fail to observe any significant impact in the rural areas of

[1] Appendix-III: Economic Decision-making Autonomy: Disaggregated Analysis includes Appendix Table 8.1.2 to Appendix Table 8.1.5.

[2] Formulations of children are: ***i)*** one child (boy/girl) as a reference category versus no child and children of both genders; ***ii)*** no child as a reference category versus only boy, girl and both genders; ***iii)*** no child as a reference category versus only boys, only girls, equal number of boys and girls, number of girls greater than boys and boys greater than girls, and ***iv)*** equal number of boys and girls as a reference category versus only boys, only girls, girls greater than boys and boys greater than girls.

'no child' or *'children'* (both genders) relative to *'no child'* in association with any level of autonomy (*Panel-III*). Appendix Table 8.1.2 shows results for the specification where *'no child'* appears as the reference category to investigate if '*boys*', '*girls*' or *'children'* (both gender) are associated with household autonomy. Results from the overall sample (*Panel-I*) show that the '*girls*' and *'children'* (both genders) relative to *'no child'* respectively increases the odds by 1.38 and 1.43 times for *'partial'* to '*no*' autonomy in the household. However, these results are inconsistent with the odds of *'strong'* to *'partial'* autonomy from evidence of the overall sample. Further, we find similar results from the urban regions (*Panel-II*) that '*girls*' and *'children'* (both genders) increase the odds by 1.59 and 1.67 times for '*no*' to *'partial'* autonomy. However the results do not support a significant association between these effects and women's autonomy except in the category of *'children'* (both genders) which depicts 1.28 times greater odds of '*no*' to *'partial'* autonomy in the rural regions (*Panel-III*).

Similarly, Appendix Table 8.1.3 (*Panel-I*) shows that '*girls'*, =, and '*greater numbers of one gender over the other*' relative to *'no child'* depict correspondingly 1.39, 1.32, 1.57, and 1.51 times greater odds of having *'partial'* to *'no'* autonomy in the household from the overall sample. We find almost identical results from the urban regions (*Panel-II*). However, '*girls'* as well as '*boys*' show respectively 1.41 and 1.30 times greater odds of *'partial'* to *'no'* autonomy from the rural regions (*Panel-III*).

Appendix Table 8.1.4 (*Panel-I*) shows that *'no child'* compared with *'equal number of boys and girls'* depict 0.76 times lower odds of *'partial'* to *'no'* autonomy. Interestingly we find that all other categories of children as '*boys only*', '*girls only*', '*greater numbers of one gender over the other*' show 0.80, 0.78, 0.87 and 0.86 times lower odds respectively for *'strong'* to *'partial'* autonomy from the urban regions (*Panel-II*). We find similar results for the rural regions. In conclusion, we find that an increasing number of children, regardless of their gender, increases women's *'partial'* autonomy but is irrelevant to the *'strong'* autonomy in the overall as well as urban samples. Further, we find that *'equal numbers of boys and girls'* also appear to significantly increase women's autonomy in the household. Similarly, the number of children or their gender appears irrelevant to women's autonomy in the rural regions. This may imply the existence of strong cultural or traditional traits of constrained women's autonomy in these areas.

We also investigate these sub-dimensions of economic decision-making through different classifications of a woman's level of education. Table 8.1 presents results of this category as *'5-years'* schooling through to *'higher levels of education'* compared with the base category of *'no education'*. Results show that *'5-years'* of schooling relative to *'no education'* appears to have greater odds of 1.22 times for *'partial'* to *'no'* autonomy from the overall sample. Similarly, *'10-12 years'* through '*higher levels of education'* compared with *'no education'* depicts respectively 1.55 and 1.29 times greater odds of *'partial'* to *'no'* autonomy and *'strong'* to *'partial'* from the overall sample. Results from the urban regions (*Panel-II*)

show that only *'10-12 years'* of schooling reflect greater odds of 1.28 times for *'partial'* to *'no'* autonomy in the household. However, we witness that *'5-years'* education increases odds by 1.25 times for *'strong'* to *'partial'* autonomy from the rural regions (*Panel-III*). Further, we observe that *'10-12 years'* schooling produces greater odds of 1.69 times for *'partial'* to *'no'* autonomy in the rural regions. Regarding age, results (Table 8.1) show that all successive age categories from *'25-29 years'* through to *'45-49 years'* compared with the base category of *'15-19 years'* substantially increases women's autonomy of *'partial'* to *'no'* and *'strong'* to *'partial'* autonomy in the household from the overall sample. The results also indicate that the highest two age brackets, respectively *'40-44 years'* and *'45-49 years'* compared to the youngest of *'15-19 years'* respectively shows greater odds of *'partial'* to *'no'* autonomy from the urban regions. Similarly, we find that each of the higher age brackets of women increases a *'partial'* to *'no'* response and *'strong'* to *'partial'* response from the rural regions. In general the results show that with increasing age comes greater autonomy in the household in both urban and rural regions.

Similar to a woman's level of education, we also investigate her husband's level of education to determine the role, if any, it plays on the level of women's autonomy. We construct the following three classifications of a husband's education level:[3] ***i)*** '*no education'* as a reference category compared with each successive category including '*5-years'* schooling through to '*higher levels of education*'; ***ii)*** '*no education'* as the reference category compared to any level of education and ***iii)*** the effect of every additional year of education. Table 8.1 shows that '*5-years'* through to *'10-12 years'* of education decreases women's autonomy in the household from the overall as well as urban samples. However, from the rural regions we do not find a husband's education associated with any level of autonomy in this particular sub-dimension of economic decision-making.

Another potentially important characteristic relating to the husband is his level of income. Results show that the '*middle'* level of income compared with the '*low*' level income depicts 1.33 times greater odds of *'partial'* to *'no'* autonomy from the overall sample. Similarly, the '*high'* level of income compared with the '*low*' income group reflects 1.91 times greater odds of *'partial'* to *'no'* autonomy of women in the household from the overall sample. Similar results are observed from the urban regions. However, from the rural regions we do not witness any significant effect of a husband's income on autonomy in the household.

On another sub-dimension, we find that family socio-economic status increases *'strong'* to *'partial'* autonomy in the overall sample as well as for the urban and rural regions. Further, we find that the province of Sindh (in the overall sample, as well as in the urban and rural regions) relative to the province of Punjab shows substantially lower levels of autonomy in the

[3] Results available on request.

overall sample. Similar results are observed regarding the other two provinces relative to Punjab from an overall sample as well as from the urban and rural regions.

8.3. Clothing and Footwear-related Decision-making Autonomy

In this section we present results of another dimension of women's autonomy regarding purchasing of clothing and footwear for themselves and family members in the household. We replicate results along similar lines discussed in reference to the food-related decision-making of women in the household. Therefore, the results correspond to evidence from the overall as well as urban and rural regions.

Table 8.2 at the end of this Chapter presents results for the model applied to clothing and footwear-related decision-making autonomy (Equation 5.3) estimated by the conventional ordered logit and multinomial logit approaches.[4] Therefore, we estimate the multinomial logit settings from the perspective of ''*partial'* to *'no'* autonomy' and ''*strong'* to *'partial'* autonomy' to investigate the varying effects of each of the determinants of sub-dimensions relating to decision-making autonomy around food.

Table 8.2 (*Panel-I*) depicts employment status results, revealing women with '*earned income*' have 1.44 and 1.36 times greater odds of having *'partial'* over *'no'* autonomy and *'strong'* over *'partial'* autonomy respectively from the overall sample. Within the urban regions, however, (*Panel-II*) employment status does not appear significantly related to food purchasing autonomy in the household. In contrast, we find that having an '*earned income*' generates greater odds of 1.42 and 1.49 times of having *'partial'* autonomy to *'no'* and '*strong'* to *'partial'* autonomy in the rural regions (*Panel-III*). These results clearly indicate the presence of a regional variation modifying the overall effect in increasing *'partial'* to *'no'* and '*strong'* to *'partial'* autonomy.

Table 8.2 (*Panel-I* through *Panel-III)* shows that increasing the household size (in all formations) significantly decreases women's autonomy in clothing and footwear-related decision-making from an overall perspective as well as from the urban and rural regions. The household size which includes elderly persons and relatives of a husband, but which excludes children, appears inversely associated with women's autonomy in the household. Table 8.2.1 (*Panel-I*) at the end of this Chapter further shows that the average size of the household decreases odds by 0.61 times for *'partial'* to *'no'* autonomy in the household from the overall sample. Similarly, the size '*above average'* decreases odds by 0.45 and 0.73 times for *'partial'* to *'no'* and *'strong'* to *'partial'* autonomy in the household from the overall sample. These

[4] Similar to the food-related autonomy, the results of the ordered logit model corresponding to clothing and footwear are not in line with the results of multinomial logit model which indicates violating the parallel line assumption: *Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 499.85 Prob > chi2 = 0.00.* See Chapter 5 for further discussion on the parallel lines assumption and its remedy.

results are statistically significant at the 1 per cent level of confidence. From the urban regions, Table 8.2.1 (*Panel-II*) shows similar trends of a negative association between increasing the household size to the levels of women's autonomy. However, the results from the rural regions (*Panel-III*) are consistent with the findings from the overall sample.

Consistent with the household size, Table 8.2.1 shows that the extended family system lowers odds by 0.82 times for *'partial'* to *'no'* autonomy from the overall sample, which is statistically significant at the 5 per cent level of confidence. From the urban regions (*Panel-II*) the extended family system shows 0.60 times lower odds of the *'partial'* to *'no'* autonomy. Interestingly, the extended family system relative to a nuclear family system does not appear to influence women's autonomy in the rural regions (*Panel-III*). Similarly the results (Table 8.2.1 *Panel-I* through *Panel-III*) show that the presence of a mother-in-law appears to lower the odds by 0.08, 0.88 and 0.12 times for *'partial'* to *'no'* autonomy respectively from the overall, urban and rural samples. Results in general appear consistent with a substantial decrease in women's autonomy when the household size is increased, when the family system is extended, and where a mother-in-law is present, particularly from *'partial'* to *'no'* autonomy categories. However, results from the rural regions show that the extended family system may not affect women's autonomy in the household.

Table 8.2.1 through Appendix Table 8.2.5 [5] presents results of the household composition in terms of different formulations of children from the overall as well as urban and rural samples. [7] Table 8.2.1(*Panel-I*), shows that *'no child'* with reference to '*one child*' (any gender) lowers odds by 0.80 for *'partial'* to *'no'* autonomy from the overall sample. On the other hand, *'children'* (both genders) relative to '*one child'* depicts 1.19 times higher odds of *'partial*' to '*no*' autonomy from the overall sample. From the urban regions (*Panel-II*), however, we witness that *'no child'* relative to '*one child*' lowers odds by 0.69 of *'partial'* to *'no'* autonomy but proves insignificant regarding *'strong'* to *'partial'* autonomy. Further, we witness that *'children'* (both genders) show 1.34 times greater odds of *'no'* to *'partial'* autonomy from the urban regions. In the rural regions, however, we fail to observe any significance of *'no child'* or *'children'* (both genders) relative to *'no child'* regarding autonomy levels (*Panel-III*). Table 8.2.2 presents the specification where *'no child'* appears as the reference category to investigate if '*boys'*, '*girls*' or *'children'* (both genders) are associated with autonomy in the household. Results from evidence in the overall sample (*Panel-I*) show that '*boys'*, '*girls*' and also *'children'* (both genders) relative to *'no child'* respectively increases odds of 1.25, 1.26 and 1.49 times of *'no'* to *'partial'* autonomy in the household. However, these results were inconsistent with the *'strong'* to *'partial'* autonomy from the overall sample. Nevertheless, we

[5] All other tables from Appendix Table 8.2.2 to Appendix Table 8.2.5 are presented in Appendix-III: Economic Decision-making Autonomy: Disaggregated Analysis.
[7] See footnote 3 for classifications of children and their gender.

find *'children'* (both genders) with relative to *'no child'* increases odds by 1.30 times of *'no'* to *'partial'* autonomy from the rural regions.

Table 8.2.3 (*Panel-I*) shows all other specified categories of children with reference to *'no child'* elicit greater odds of having *'partial'* to *'no'* autonomy in the household from the overall sample. Further, the category of *'equal number of boys and girls'* relative to *'no child'* increases the odds by 1.25 times of *'partial'* to *'strong'* autonomy from the overall sample. We find identical results within the urban regions (*Panel-II*). However, the categories of *'equal number of boys and girls'* and '*greater numbers of one gender over the other*' respectively show 1.26, 1.31 and 1.35 times greater odds of *'partial'* to *'no'* autonomy from the rural regions (*Panel-III*).

Appendix Table 8.2.4 (*Panel-I*) shows that within the overall sample, *'no child'* or any other formulation of children compared with *'equal number of boys and girls'* lowers the *'partial'* as well as *'strong'* autonomy of women in this particular dimension of women's autonomy. This is consistent with the evidence of the urban and rural regions. Finally we find that *'equal numbers of boys and girls'* appears to significantly increase women's autonomy in the household. Interestingly, the number of children or their gender does not appear relevant in influencing women's autonomy from the rural regions. This may imply the existence of strong cultural or traditional traits of constrained women's autonomy in these areas.

The results using different specifications of a woman's education level is presented in Table 8.2 and show that education substantially increases women's *'partial'* autonomy from the overall sample. Similar results are witnessed in the rural regions. Interestingly we do not find supporting evidence in the urban regions, that a level of education increases women's autonomy regarding clothing and footwear purchasing. As for age, results (Table 8.2) show that all successive age categories from *'25-29 years'* through to *'45-49 years'* compared with the base category of *'15-19 years'* substantially increases women's autonomy from *'partial'* to *'no'* and *'strong'* to *'partial'* levels in the overall and rural samples. However, only the two top age categories have been observed to significantly increase women's autonomy within the urban regions.

Further, we observed there was a lack of significant association between a husband's level of education and a woman's autonomy in clothing and footwear-related decision-making in the household. Interestingly however, we find that a husband's '*average'* income level relative to the '*low'* income group is significantly associated with increasing *'partial'* to *'strong'* autonomy. Similarly, we find that family socio-economic status increases levels of autonomy from *'strong'* to *'partial'* in the overall as well as urban and rural samples. Furthermore, we find that the province of Sindh relative to the province of Punjab shows substantially lower levels of autonomy in the overall sample as well as in the urban and rural Sindh regions. Similar

results were found when comparing the other two provinces with Punjab from the overall as well as urban and rural samples.

8.4. Recreation and Travel-related Decision-making Autonomy

The third dimension of autonomy relates to women's activities outside of the household. This is also an important component of the aggregate economic autonomy of women at the household level. More specifically, recreation and travel autonomy infers independent decision-making in selecting and planning external activities for herself and the family. Similar to the previous analysis, we present results of each determinant in association with recreation and travel.

Table 8.3 at the end of this Chapter presents the results of the recreation and travel-related decision-making autonomy model (Equation 5.4) estimated by the conventional ordered logit and multinomial logit approaches from the overall as well as urban and rural samples. Similar to food-related autonomy, the results of the ordered logit model here are not consistent with the results of the multinomial logit model, which indicates violation of the parallel line assumption.[8] Therefore, we attempt to estimate the multinomial logit settings from the perspective of *'partial'* to *'no'* autonomy' and *'strong'* to *'partial'* autonomy to investigate the varying effects of each of the determinants of the sub-dimension regarding food-related decisions.

Table 8.3 (*Panel-I*) shows that women from the urban regions with an '*earned income*' were 1.61 more likely to have *'partial'* over *'no'* autonomy, however, an '*employed*' status appears no different from an '*unemployed*' status in the overall sample and the rural regions. Table 8.3 (*Panel-I*) also shows that an increasing household size (all formulations) significantly decreases women's autonomy in the household in the overall as well as urban and rural samples. Similarly, household size (including elderly persons and relatives of husband, but excluding children) appears inversely related to women's autonomy in the household. Table 8.3.1 (*Panel-I*) at the end of this Chapter shows that the '*average*' sized household lowered odds by 0.56 times of *'partial'* to *'no'* autonomy in the overall sample. Similarly, the size '*above average'* lowered odds by 0.45 and 0.80 times of *'partial'* to *'no'* and *'strong'* to *'partial'* autonomy in the overall sample. These results are statistically significant at the 1 per level of confidence. Further, we find similar results for the urban and rural regions regarding increasing household size. Results (Table 8.3.1) show the extended family system lowers odds by 0.84 times of *'partial'* to *'no'* autonomy from the overall sample, statistically significant at the 5 per cent level of confidence. Similarly, within the rural regions (*Panel-III*) the extended family system shows 0.81 times lower odds of *'partial'* to *'no'* autonomy. Interestingly, the extended family system relative to the nuclear family system does not appear to influence women's autonomy in the urban regions

[8] *Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 539.01 Prob > chi2 = 0.00.* See Chapter 5 for further discussion on parallel lines assumption and its remedy

(*Panel-II*). Similarly the results (Table 8.3.1 *Panel-I* through *Panel-III*) show that the presence of a mother-in-law lowers odds by 0.18, 0.11 and 0.19 times respectively, of *'partial'* to *'no'* autonomy in all samples. Results consistently observe that increasing the household size, having an extended family system and the presence of a mother-in-law substantially decreases women's autonomy, particularly from *'partial'* to *'no'* levels.

Table 8.3.1 (*Panel-I and II*) shows *'children'* (both genders) relative to '*one child'* increases odds of 1.13 and 1.24 times of *'no'* to *'partial'* autonomy in the household, from both the overall and urban sample. Conversely, we fail to observe any significance regarding *'no child'* or *'children'* (both genders) relative to '*one child'* in association with any level of autonomy from the rural regions (*Panel-III*). Appendix Table 8.3.2[9] presents the specification where *'no child'* appears as the reference category to investigate if '*boys*', '*girls*' or *'children'* (both gender) are associated with autonomy in the household. Results from the overall sample (*Panel-I through III*) confirm that *'children'* (both genders) relative to *'no child'* correspondingly depict 1.26, 1.49 and 1.49 times greater odds of *'no'* to *'partial'* autonomy from both the overall and urban samples.

Table 8.3.3 (*Panel-I*) shows all other specified categories of *'children'* relative to *'no child'* depict correspondingly greater odds of having *'no'* to *'partial'* autonomy in the household from the overall sample. Further the category of *'equal numbers of boys and girls'* with reference to *'no child'* depicts 1.25 greater odds of *'partial'* to *'strong'* autonomy from the overall sample. We find identical results from the urban regions (*Panel-II*). Table 8.3.4 (*Panel-I*) shows that *'no child'* or any other formulation of children compared with *'equal number of boys and girls*' is significantly related to the *'partial'* or *'strong'* autonomy of women in this particular dimension within all samples. Finally we find that *'equal numbers of boys and girls'* is also unrelated to increasing women's autonomy in travel and recreation-related aspects of decision-making.

Regarding women's education, Table 8.3 presents the findings that the more educated women enjoy a higher level of *'strong'* autonomy in travel and recreation decisions compared with uneducated women, in the overall and urban samples. However, this is found partial significant from the rural regions sample. Regarding a woman's age, results (Table 8.3) consistently show that all successive age categories from *'25-29 years'* through to *'45-49 years'* relative to the base category of *'15-19 years'* increases both *'partial'* and *'strong'* autonomy in one or more dimensions in all three samples.

Women's autonomy regarding decisions relating to travel and recreation does not appear linked to the level of a husband's education. These results are consistent with other dimensions of women's autonomy. However, a husband's level of income appears statistically

[9] All table from Appendix Table 8.3.2 to Appendix Table 8.3.5 are presented in Appendix-III: Economic Decision-making Autonomy: Disaggregated Analysis.

significant in terms of increasing the odds of *'partial'* to *'no'* responses from all samples. Similarly, we find that family socio-economic status increases *'strong'* to *'partial'* autonomy in the overall as well as urban and rural regions. We also find that the province of Sindh relative to the province of Punjab shows substantially lower levels of autonomy in the overall sample as well as the urban and rural Sindh regions. Similar results are observed relating to the two other provinces in comparison with Punjab, from all three samples.

8.5. Medical Treatment-related Decision-making Autonomy

Medical treatment autonomy refers to the ability of a woman to independently undertake medical-related consultations. We replicate the analysis along similar lines to other dimensions of women's autonomy. We present results from the overall sample as well as the urban and rural regions, subject to different formulations of variables of interest.

Table 8.4 (*Panel-I*) at the end of this Chapter shows women with '*earned income*' have greater odds of 1.67 of *'partial'* over *'no'* autonomy in the urban regions, however, having an '*employed status*' appears no different to results for those with an '*unemployed status*', both in the overall and rural samples. It is interesting to note that the above results are identical to the results we found regarding travel and recreation autonomy. Corresponding to the other threat option the overall results (*Panel-I*) show that increasing the household size (including children, elderly persons and relatives of the husband) significantly decreases women's autonomy in the household overall as well as in the urban and rural regions. Similarly, where the household size excludes children but includes elderly persons and relatives of the husband, women's autonomy appears inversely associated. Table 8.4.1 (*Panel-I*) at the end of this Chapter shows that the '*average*' size of the household decreases odds by 0.61 and 0.81 times respectively, of *'partial'* to *'no'* autonomy and *'strong'* to *'partial'* from the overall sample.

Similarly, the size *'above average'* further decreases odds by 0.40 and 0.65 times respectively, of *'partial'* to *'no'* and *'strong'* to *'partial'* autonomy in the household from the overall sample. The above results are statistically significant at the 1 per cent level of confidence. Further, we find similar results of an increasing household size in the urban and the rural regions. An extended family system lowers the odds by 0.86 times for *'partial'* to *'no'* autonomy from the overall sample, a statistically significant result at the 10 per cent level of confidence. Similarly we find the extended family system reflects 0.79 times lower odds of the *'partial'* to *'no'* autonomy from the urban regions. These results are consistent with those from the rural regions. Similarly Table 8.4.1 (*Panel-I* through *to Panel-III*) shows that the presence of a mother-in-law lowers odds by 0.14, 0.11 and 0.18 times respectively of *'partial'* to *'no'* autonomy from the overall, urban and rural samples. Results generally indicate that increasing household size, an extended family system and the presence of a mother-in-law substantially decreases women's autonomy, particularly from *'partial'* to *'no'* autonomy in the household.

Regarding the number of children, we reproduce results along similar lines as observed in the other sub-dimensions of autonomy. Table 8.4.1 through to Appendix Table 8.4.5 present results of different formulations of children regarding women's autonomy in medical treatment-related decision-making from the overall as well as urban and rural regions.[13]

Table 8.4.1 (*Panel-I and II*) at the end of this Chapter shows having *'children'* (both genders) relative to '*one child'* results in higher odds of 1.11 and 1.23 times of *'no'* to *'partial'* autonomy respectively from the overall and urban sample. Conversely, no significance is found in the categories of *'no child'* or *'children'* (both genders) relative to '*one child'* regarding any level of autonomy from the rural regions (*Panel-III*). Appendix Table 8.4.2[14] presents the specification where the *'no child'* category appears as the reference category to investigate if '*boys*', '*girls*' or *'children'* (both gender) are associated with autonomy in the household. Results from the overall sample (*Panel-I through II*) confirm that *'children'* (both genders) relative to *'no child'* heightens odds by 1.32 and 1.63 times of *'no'* to *'partial'* autonomy in the overall and urban regions.

Similarly, Table 8.4.3 (*Panel-I*) finds all other specified categories of *'children'* relative to *'no child'* has greater odds of having *'no'* to *'partial'* autonomy in the household from the overall sample. Further, the category of *'equal numbers of boys and girls'* relative to *'no child'* depicts 1.26 greater odds of *'strong'* to *'partial'* autonomy from the overall sample. We find identical results from the urban regions (*Panel-II*). Table 8.4.4 (*Panel-I*) shows that *'no child'* or any other formulation of children compared with *'equal numbers of boys and girls'* is significantly related to the *'partial'* or *'strong'* autonomy of women in this particular dimension from all samples. Finally, we find that *'equal numbers of boys and girls'* does not significantly increase women's autonomy in medical-related decisions.

Regarding women's education, Table 8.4 illustrates that relatively more educated women enjoy higher rates of *'strong'* autonomy in medical treatment decisions compared with uneducated women from the overall as well urban regions. However, this is particularly significant in the rural regions. Regarding age, results consistently show that each successive age category from *'25-29 years'* through to *'45-49 years'* compared with the base category of *'15-19 years'* increases both *'partial'* and *'strong'* responses in one of the decision-making dimensions in the household, from all samples.

Furthermore, we find women's medical treatment-related decision-making is particularly influenced by a husband's higher education levels compared with the uneducated. This is consistently confirmed in all three samples. A husband's level of income also appears statistically significant in increasing women's *'partial'* to *'no'* autonomy in all three samples.

[13] See footnote 3 for classifications of children and their gender.
[14] All tables from Appendix Table 8.4.2 to Appendix Table 8.4.5 are presented in Appendix-III: Economic Decision-making Autonomy: Disaggregated Analysis.

Conversely, we do not find any supporting evidence that the family socio-economic status of women impacts on any level of autonomy in medical treatment-related decision-making for any sample. Further, we find that the province of Sindh relative to the province of Punjab shows substantially lower levels of autonomy in the overall sample as well as in the urban and rural Sindh regions, particularly in the categories of *'strong'* to *'partial'* autonomy. Similar results are observed corresponding to the other two provinces in comparison with Punjab, from an overall as well as urban and rural regional perspective.

8.6. Concluding Remarks

Overall results appear consistent with the evidence we observed in Chapter 7 of aggregate economic decision-making autonomy of women in the household. For instance, we observed that the threat options of an earned income and the size of the household influence women's autonomy in the decision-making spheres of food, clothing and footwear, travel and recreation and medical-related decision-making, in both regions and overall. However, it may be relevant to note that the threat options and other determinants are related to women's autonomy in a variety of ways, according to each dimension of autonomy and region. We were able to observe this relative variation by using the multinomial logit model. As a result, this can be considered an important contribution of this research.

We observed that employed women enjoyed relatively higher degrees of *'partial'* and/or *'strong'* autonomy in the household regarding food and clothing and footwear purchasing decision-making, both from the overall sample and the rural regions, in contrast to the urban regions where correlations were statistically insignificant. Not surprisingly, we find that being employed increases women's autonomy from '*zero*' to *'partial'* levels in the context of independent travel and recreation, and medical treatment-related decision-making from the urban regions, although correlations for the rural regions proved statistically insignificant. These results clearly indicate a regional variation.

Results clearly demonstrate that an increasing size of household (excluding children) leads to a decrease in women's autonomy across all dimensions of decision-making. Furthermore, the above results are almost identical across both the urban and the rural regions. Similarly, we observed that the extended family formation appears to diminish women's autonomy in the household, for both the urban and rural areas, in the context of all four dimensions of decision-making. Results also illustrate that the presence of a mother-in-law corresponds to a decrease in a woman's autonomy across all four dimensions, from the urban and rural regions. In summary, the household size (excluding children) that includes an extended family formation and a mother-in-law decreases women's decision-making power in the household.

In contrast, however, we find that within the urban regions, an increasing number of children in a household increases women's autonomy. We also observed that the gender of children has little impact on increasing women's autonomy. The rural regions provide a contrast in that the presence of children does not appear to significantly heighten women's autonomy. The regional differences regarding the effect of children on women's autonomy can be broadly linked to the prevailing strong cultural backgrounds in each area. For example, we commonly observe that men from rural or tribal regions are more likely to have multiple wives regardless of the desire for more children. All other determinants appear with usual meanings in association with the above four dimensions of autonomy as observed with aggregated economic decision-making aspect of women's autonomy.

Table 8.1: Determinants of Women's autonomy in Economic Decision-making (Food autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Regions***						***Panel-III: Rural Regions***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.54	0.00	1.45	0.00	1.36	0.03	1.23	0.12	1.11	0.62	1.21	0.25	1.72	0.00	1.64	0.00	1.49	0.05
Household Size	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.93	0.05	0.75	0.00	1.03	0.81	0.94	0.05	0.60	0.01	0.79	0.08	0.93	0.05	0.85	0.07	0.92	0.58
	Above Average	0.57	0.00	0.43	0.00	0.78	0.00	0.54	0.00	0.34	0.00	0.90	0.06	0.58	0.00	0.49	0.00	0.73	0.00
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.79	0.00	0.68	0.00	0.88	0.16	0.77	0.21	0.60	0.00	0.93	0.61	0.81	0.12	0.71	0.17	0.86	0.23
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.33	0.01	0.64	0.00	1.01	0.98	0.28	0.31	0.70	0.00	0.83	0.86	0.39	0.02	0.51	0.00	1.27	0.55
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.35	0.14	1.36	0.19	1.30	0.14	1.34	0.28	1.74	0.10	1.08	0.82	1.41	0.15	1.30	0.22	1.44	0.11
	25-29 years	1.72	0.00	1.67	0.16	1.63	0.01	1.86	0.34	2.25	0.02	1.52	0.22	1.72	0.00	1.56	0.34	1.69	0.02
	30-34 years	2.19	0.00	2.28	0.15	1.76	0.00	2.42	0.17	3.10	0.20	1.67	0.13	2.12	0.00	2.11	0.21	1.77	0.01
	35-39 years	2.56	0.00	2.55	0.00	2.17	0.00	2.49	0.17	3.70	0.00	1.63	0.15	2.67	0.00	2.25	0.17	2.55	0.00
	40-44 years	2.78	0.00	2.91	0.00	2.18	0.00	2.95	0.00	4.05	0.00	1.94	0.14	2.67	0.00	2.58	0.00	2.25	0.00
	45-49 years	2.43	0.00	3.14	0.00	1.83	0.01	2.64	0.00	4.04	0.00	1.86	0.12	2.36	0.00	3.00	0.00	1.75	0.04

continue…

Table 8.1(…continued): Determinants of Women's autonomy in Economic Decision-making (Food autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.22	0.02	1.22	0.08	1.07	0.47	0.91	0.43	1.08	0.64	0.83	0.18	1.41	0.00	1.26	0.14	1.25	0.10
	8-years education	1.10	0.48	1.16	0.42	1.05	0.77	0.85	0.26	0.94	0.79	0.91	0.66	1.42	0.10	1.24	0.44	1.29	0.34
	10-12years education	1.20	0.09	1.55	0.00	0.89	0.45	1.04	0.75	1.28	0.10	0.91	0.60	1.20	0.40	1.69	0.04	0.77	0.30
	Higher education	1.34	0.02	1.07	0.73	1.29	0.10	1.10	0.52	0.91	0.68	1.17	0.43	1.41	0.29	1.08	0.84	1.40	0.34
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.83	0.01	0.87	0.12	0.87	0.12	0.79	0.04	0.75	0.07	0.92	0.59	0.85	0.04	0.91	0.34	0.88	0.25
	8-years education	0.96	0.63	0.82	0.08	1.11	0.33	0.91	0.51	0.77	0.14	1.10	0.57	0.95	0.63	0.79	0.11	1.14	0.38
	10-12years education	0.86	0.14	0.73	0.00	1.01	0.96	0.77	0.04	0.63	0.01	1.02	0.92	0.93	0.52	0.79	0.14	1.02	0.87
	Higher education	0.82	0.04	0.80	0.14	0.86	0.24	0.78	0.14	0.68	0.03	0.92	0.67	0.82	0.13	0.88	0.48	0.81	0.25
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.13	0.17	1.33	0.00	1.07	0.42	1.23	0.19	1.55	0.00	1.04	0.72	1.03	0.71	1.10	0.30	1.10	0.35
	High income	1.19	0.24	1.91	0.00	0.92	0.66	1.35	0.11	1.93	0.02	1.01	0.96	1.10	0.70	2.34	0.01	0.76	0.43
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.06	0.97	0.78	1.21	0.06	1.22	0.02	0.94	0.74	1.27	0.15	1.11	0.03	0.98	0.89	1.18	0.20
	High income	1.28	0.00	0.85	0.19	1.44	0.00	1.27	0.09	0.81	0.26	1.38	0.06	1.24	0.05	0.81	0.17	1.46	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.38	0.00	0.64	0.00	0.40	0.00	0.62	0.00	0.81	0.09	0.62	0.01	0.25	0.00	0.53	0.00	0.25	0.00
	NWFP	0.13	0.00	0.18	0.00	0.50	0.02	0.10	0.00	0.12	0.00	0.61	0.14	0.12	0.00	0.19	0.00	0.47	0.03
	Baluchistan	0.07	0.00	0.12	0.00	0.28	0.00	0.12	0.00	0.25	0.00	0.18	0.00	0.05	0.00	0.09	0.00	0.34	0.01

Notes:

Panel-I: this Panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (26) = 4322.57; Prob > chi2 = 0.0000; Log likelihood = -11386.186; Pseudo R2 = 0.1595. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 251.91, Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (52, 1050) = 378.95; Prob > F = 0.00.*

Panel-II: this Panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(26, 502)=12.71, P > F = 0.00. Pseudo R2 = 0.1595. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 251.91, Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(52, 476) = 74.76; Prob > F = 0.00.*

Panel-III: this Panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 527, F(26, 549) = 21.13, P>F=0.00. Pseudo R2 = 0.1595. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 251.91, Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (52,523) = 321.06; Prob > F = 0.00*

Table 8.1.1: Determinants of Women's autonomy in Economic Decision-making (Food autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.49	0.00	1.39	0.00	1.34	0.05	1.20	0.18	1.07	0.75	1.18	0.33	1.66	0.00	1.55	0.00	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.74	0.00	0.61	0.00	0.89	0.21	0.70	0.00	0.59	0.00	0.79	0.07	0.77	0.01	0.60	0.00	0.98	0.87
	Above Average	0.52	0.00	0.37	0.00	0.73	0.00	0.46	0.00	0.31	0.00	0.71	0.01	0.56	0.00	0.40	0.00	0.77	0.02
Household Size: Children	Boy/Girl	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No child	0.91	0.27	0.78	0.03	1.03	0.82	0.75	0.05	0.68	0.04	0.90	0.55	1.02	0.83	0.86	0.29	1.12	0.46
	Boys/Girls (both)	1.19	0.00	1.12	0.13	1.17	0.06	1.22	0.05	1.14	0.28	1.15	0.29	1.16	0.04	1.10	0.32	1.17	0.11
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.86	0.07	0.81	0.04	0.91	0.38	0.87	0.26	0.73	0.07	1.04	0.82	0.86	0.15	0.85	0.23	0.84	0.22
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.37	0.02	0.85	0.00	1.08	0.85	0.28	0.27	0.52	0.00	1.17	0.88	0.44	0.05	0.48	0.00	1.36	0.44
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.15	0.33	1.09	0.65	1.22	0.28	1.04	0.88	1.30	0.45	0.98	0.94	1.29	0.16	1.09	0.67	1.40	0.15
	25-29 years	1.28	0.10	1.13	0.53	1.42	0.07	1.20	0.54	1.37	0.39	1.23	0.55	1.42	0.06	1.13	0.57	1.58	0.06
	30-34 years	1.47	0.02	1.33	0.17	1.45	0.06	1.37	0.31	1.59	0.21	1.25	0.51	1.61	0.01	1.34	0.22	1.58	0.07
	35-39 years	1.71	0.00	1.48	0.06	1.78	0.01	1.47	0.18	1.98	0.07	1.26	0.50	1.96	0.00	1.40	0.17	2.21	0.00
	40-44 years	2.09	0.00	2.02	0.00	1.88	0.00	2.06	0.02	2.79	0.01	1.61	0.16	2.15	0.00	1.86	0.01	2.01	0.01
	45-49 years	2.00	0.00	2.46	0.00	1.65	0.04	2.04	0.04	3.13	0.00	1.61	0.24	2.06	0.00	2.44	0.00	1.63	0.10

continue…

Table 8.1.1 (…continued): Determinants of Women's autonomy in Economic Decision-making (Food autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Regions***						***Panel-III: Rural Regions***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.24	0.01	1.25	0.05	1.09	0.41	0.94	0.62	1.15	0.40	0.84	0.22	1.42	0.00	1.26	0.14	1.27	0.09
	8-years education	1.13	0.38	1.18	0.36	1.07	0.71	0.87	0.36	0.97	0.89	0.92	0.68	1.45	0.10	1.28	0.39	1.31	0.31
	10-12years education	1.24	0.04	1.64	0.00	0.91	0.53	1.08	0.55	1.37	0.10	0.91	0.59	1.24	0.32	1.80	0.02	0.79	0.35
	Higher education	1.42	0.01	1.17	0.41	1.34	0.08	1.20	0.22	1.03	0.90	1.22	0.32	1.49	0.22	1.15	0.73	1.47	0.28
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.83	0.01	0.89	0.19	0.87	0.14	0.78	0.03	0.74	0.07	0.91	0.55	0.86	0.06	0.94	0.52	0.88	0.27
	8-years education	0.98	0.79	0.84	0.12	1.13	0.27	0.94	0.64	0.77	0.15	1.12	0.49	0.96	0.73	0.81	0.16	1.15	0.34
	10-12years education	0.88	0.15	0.76	0.01	1.02	0.86	0.80	0.08	0.66	0.01	1.05	0.78	0.94	0.56	0.81	0.14	1.02	0.87
	Higher education	0.84	0.07	0.83	0.15	0.87	0.28	0.83	0.17	0.73	0.08	0.95	0.80	0.82	0.14	0.90	0.55	0.81	0.25
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.04	0.46	1.17	0.03	1.03	0.71	1.08	0.39	1.30	0.03	0.98	0.87	0.97	0.65	1.01	0.98	1.07	0.52
	High income	1.14	0.37	1.77	0.01	0.91	0.62	1.21	0.34	1.65	0.08	0.98	0.93	1.10	0.67	2.25	0.01	0.77	0.44
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.27	0.00	1.11	0.28	1.26	0.02	1.37	0.02	1.14	0.48	1.29	0.13	1.21	0.03	1.09	0.44	1.23	0.12
	High income	1.52	0.00	1.08	0.40	1.55	0.00	1.54	0.00	1.15	0.41	1.42	0.04	1.43	0.00	0.99	0.90	1.57	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.37	0.00	0.62	0.00	0.40	0.00	0.59	0.00	0.74	0.08	0.62	0.01	0.24	0.00	0.53	0.00	0.24	0.00
	NWFP	0.12	0.00	0.17	0.00	0.49	0.02	0.09	0.00	0.11	0.00	0.59	0.12	0.12	0.00	0.18	0.00	0.46	0.02
	Baluchistan	0.06	0.00	0.11	0.00	0.28	0.00	0.11	0.00	0.21	0.00	0.18	0.00	0.05	0.00	0.09	0.00	0.34	0.01

Notes:

Panel-I: this Panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (28) = 4361.12; Prob > chi2 = 0.00; Log likelihood = -11366.914; Pseudo R2 = 0.1610. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 290.34 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (56, 1046) = 366.78; Prob > F = 0.00.*

Panel-II: this Panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(28, 500)=13.06, P > F = 0.00. Pseudo R2 = 0.1610. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 290.34 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(56, 472) = 7.45; Prob > F = 0.00.*

Panel-III: this Panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. no. of Obs = 8204; Design df = 78.36, F(28, 547) = 18.85, P>F=0.00. Pseudo R2 = 0.1610. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 290.34 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(56,519) = 301.26; Prob > F = 0.00*

Table 8.2: Determinants of Women's autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.61	0.00	1.44	0.00	1.36	0.03	1.28	0.08	1.38	0.13	1.21	0.25	1.79	0.00	1.42	0.01	1.49	0.05
Household Size	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.88	0.09	0.70	0.00	1.03	0.81	0.97	0.82	0.71	0.08	0.79	0.08	0.83	0.05	0.68	0.00	0.92	0.58
	Above Average	0.70	0.00	0.49	0.00	0.78	0.00	0.82	0.07	0.42	0.00	0.90	0.06	0.65	0.00	0.51	0.00	0.73	0.00
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.92	0.20	0.76	0.00	0.88	0.16	0.87	0.18	0.68	0.02	0.93	0.61	0.92	0.35	0.77	0.16	0.86	0.23
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.24	0.00	0.07	0.00	1.01	0.98	0.04	0.00	0.43	0.00	0.83	0.86	0.41	0.01	0.10	0.00	1.27	0.55
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.33	0.13	1.30	0.19	1.30	0.14	1.13	0.61	1.40	0.26	1.08	0.82	1.47	0.02	1.29	0.15	1.44	0.11
	25-29 years	1.56	0.00	1.54	0.23	1.63	0.01	1.49	0.16	1.98	0.24	1.52	0.22	1.59	0.01	1.41	0.15	1.69	0.02
	30-34 years	2.19	0.00	2.28	0.15	1.76	0.00	2.42	0.17	3.10	0.20	1.67	0.13	2.12	0.00	2.11	0.21	1.77	0.01
	35-39 years	2.56	0.00	2.55	0.00	2.17	0.00	2.49	0.07	3.70	0.13	1.63	0.15	2.67	0.00	2.25	0.00	2.55	0.00
	40-44 years	2.78	0.00	2.91	0.00	2.18	0.00	2.95	0.00	4.05	0.00	1.94	0.14	2.67	0.00	2.58	0.00	2.25	0.00
	45-49 years	2.43	0.00	3.14	0.00	1.83	0.01	2.64	0.00	4.04	0.00	1.86	0.12	2.36	0.00	3.00	0.00	1.75	0.04

…continue

Table 8.2 (…continued): Determinants of Women's autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit		Multinomial Logit				Ordered Logit		Multinomial Logit				Ordered Logit		Multinomial Logit			
				Partial to no autonomy		Strong to partial autonomy				Partial to no autonomy		Strong to partial autonomy				Partial to no autonomy		Strong to partial autonomy	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.36	0.00	1.19	0.10	1.07	0.47	1.00	0.97	0.95	0.76	0.83	0.18	1.48	0.00	1.28	0.08	1.25	0.10
	8-years education	1.51	0.00	1.53	0.01	1.05	0.77	1.04	0.77	1.10	0.67	0.91	0.66	1.72	0.01	1.79	0.02	1.29	0.34
	10-12years education	1.52	0.00	1.43	0.01	0.89	0.45	1.00	0.97	1.01	0.97	0.91	0.60	1.70	0.00	1.83	0.01	0.77	0.30
	Higher education	2.31	0.00	1.27	0.10	1.29	0.10	1.55	0.01	0.97	0.90	1.17	0.43	1.86	0.03	1.54	0.21	1.40	0.34
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.94	0.38	1.02	0.77	0.87	0.12	0.99	0.96	1.00	0.98	0.92	0.59	0.95	0.51	1.02	0.83	0.88	0.25
	8-years education	1.10	0.22	0.89	0.27	1.11	0.33	1.17	0.22	0.97	0.87	1.10	0.57	1.02	0.83	0.82	0.12	1.14	0.38
	10-12years education	0.94	0.47	0.87	0.16	1.01	0.96	1.14	0.29	0.93	0.64	1.02	0.92	0.85	0.11	0.83	0.11	1.02	0.87
	Higher education	0.97	0.73	1.12	0.31	0.86	0.24	1.05	0.72	1.04	0.84	0.92	0.67	0.94	0.61	1.20	0.20	0.81	0.25
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.22	0.00	1.47	0.00	1.07	0.42	1.22	0.02	1.54	0.00	1.04	0.72	1.13	0.15	1.36	0.00	1.10	0.35
	High income	1.33	0.15	1.39	0.12	0.92	0.66	1.36	0.12	1.35	0.32	1.01	0.96	1.31	0.27	1.54	0.19	0.76	0.43
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.10	0.06	0.92	0.31	1.21	0.06	1.28	0.07	0.85	0.38	1.27	0.15	1.00	0.98	0.92	0.41	1.18	0.20
	High income	1.36	0.00	1.24	0.17	1.44	0.00	1.51	0.00	0.81	0.25	1.38	0.06	1.18	0.05	0.75	0.13	1.46	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.40	0.00	0.77	0.01	0.40	0.00	0.76	0.05	0.94	0.71	0.62	0.01	0.22	0.00	0.72	0.01	0.25	0.00
	NWFP	0.29	0.00	0.33	0.00	0.50	0.02	0.48	0.00	0.29	0.00	0.61	0.14	0.25	0.00	0.34	0.00	0.47	0.03
	Baluchistan	0.08	0.00	0.18	0.00	0.28	0.00	0.12	0.00	0.32	0.00	0.18	0.00	0.06	0.00	0.15	0.00	0.34	0.01

Notes:

Panel-I: this Panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (26) = 3793.82; Prob > chi2 = 0.0000; Log likelihood = -12577.636; Pseudo R2 = 0.1311. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 499.85 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (52, 1050) = 14.90; Prob > F = 0.00.*

Panel-II: this Panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(26, 502)=11.25, P > F = 0.00. Pseudo R2 = 0.1311. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 499.85 Prob > chi2 = 0.00****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(52, 476) = 84.63; Prob > F = 0.00.*

Panel-III: this Panel refers to results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(26, 549) = 23.74, P>F=0.00. Pseudo R2 = 0.1311. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 499.85 Prob > chi2 = 0.00****2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(52,523) = 12.59; Prob > F = 0.00*

Table 8.2.1: Determinants of Women's autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.59	0.00	1.39	0.00	1.34	0.05	1.27	0.10	1.33	0.19	1.18	0.33	1.75	0.00	1.36	0.02	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.82	0.00	0.61	0.00	0.89	0.21	0.91	0.44	0.60	0.00	0.79	0.07	0.79	0.01	0.61	0.00	0.98	0.87
	Above Average	0.70	0.00	0.45	0.00	0.73	0.00	0.79	0.02	0.40	0.00	0.71	0.01	0.66	0.00	0.47	0.00	0.77	0.02
Household Size: Children	Boy/Girl	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No child	0.86	0.09	0.80	0.02	1.03	0.82	0.76	0.06	0.69	0.03	0.90	0.55	0.97	0.79	0.86	0.23	1.12	0.46
	Boys/Girls (both)	1.13	0.04	1.19	0.02	1.17	0.06	1.08	0.41	1.34	0.03	1.15	0.29	1.15	0.07	1.12	0.21	1.17	0.11
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.92	0.28	0.82	0.05	0.91	0.38	0.86	0.23	0.72	0.08	1.04	0.82	0.93	0.44	0.84	0.13	0.84	0.22
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.25	0.00	0.08	0.00	1.08	0.85	0.04	0.00	0.88	0.00	1.17	0.88	0.45	0.03	0.12	0.00	1.36	0.44
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.18	0.21	1.07	0.67	1.22	0.28	1.00	1.00	1.08	0.81	0.98	0.94	1.35	0.07	1.11	0.55	1.40	0.15
	25-29 years	1.27	0.09	1.08	0.63	1.42	0.07	1.20	0.48	1.21	0.53	1.23	0.55	1.35	0.08	1.07	0.71	1.58	0.06
	30-34 years	1.45	0.01	1.19	0.31	1.45	0.06	1.52	0.13	1.06	0.85	1.25	0.51	1.43	0.05	1.32	0.17	1.58	0.07
	35-39 years	1.85	0.00	1.60	0.01	1.78	0.01	1.58	0.08	1.54	0.21	1.26	0.50	2.03	0.00	1.69	0.01	2.21	0.00
	40-44 years	2.20	0.00	2.01	0.00	1.88	0.00	1.78	0.04	1.93	0.06	1.61	0.16	2.37	0.00	2.11	0.00	2.01	0.01
	45-49 years	2.23	0.00	2.31	0.00	1.65	0.04	2.17	0.01	2.34	0.02	1.61	0.24	2.21	0.00	2.45	0.00	1.63	0.10

…continue

Table 8.2.1 (…continued): Determinants of Women's autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.38	0.00	1.21	0.07	1.09	0.41	1.02	0.88	0.98	0.99	0.84	0.22	1.49	0.00	1.28	0.08	1.27	0.09
	8-years education	1.53	0.00	1.56	0.01	1.07	0.71	1.06	0.66	1.14	0.57	0.92	0.68	1.75	0.01	1.83	0.01	1.31	0.31
	10-12years education	1.56	0.00	1.50	0.01	0.91	0.53	1.02	0.89	1.07	0.75	0.91	0.59	1.76	0.00	1.94	0.00	0.79	0.35
	Higher education	2.42	0.00	1.38	0.09	1.34	0.08	1.62	0.00	1.10	0.70	1.22	0.32	1.96	0.02	1.63	0.16	1.47	0.28
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	1.04	0.64	0.87	0.14	0.99	0.91	0.98	0.92	0.91	0.55	0.96	0.58	1.05	0.64	0.88	0.27
	8-years education	1.11	0.20	0.90	0.31	1.13	0.27	1.18	0.19	0.98	0.89	1.12	0.49	1.03	0.80	0.82	0.14	1.15	0.34
	10-12years education	0.95	0.53	0.90	0.27	1.02	0.86	1.15	0.24	0.97	0.86	1.05	0.78	0.85	0.11	0.84	0.16	1.02	0.87
	Higher education	0.98	0.82	1.15	0.20	0.87	0.28	1.07	0.60	1.10	0.58	0.95	0.80	0.94	0.64	1.21	0.17	0.81	0.25
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.01	1.31	0.00	1.03	0.71	1.15	0.09	1.31	0.02	0.98	0.87	1.07	0.36	1.24	0.01	1.07	0.52
	High income	1.28	0.12	1.28	0.25	0.91	0.62	1.29	0.20	1.17	0.61	0.98	0.93	1.28	0.30	1.45	0.25	0.77	0.44
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.03	1.03	0.76	1.26	0.02	1.33	0.03	0.99	0.95	1.29	0.13	1.07	0.39	1.02	0.85	1.23	0.12
	High income	1.52	0.00	1.03	0.14	1.55	0.00	1.62	0.00	1.09	0.64	1.42	0.04	1.33	0.01	0.91	0.36	1.57	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.39	0.00	0.75	0.00	0.40	0.00	0.75	0.04	0.89	0.49	0.62	0.01	0.22	0.00	0.72	0.01	0.24	0.00
	NWFP	0.28	0.00	0.31	0.00	0.49	0.02	0.47	0.00	0.27	0.00	0.59	0.12	0.24	0.00	0.33	0.00	0.46	0.02
	Baluchistan	0.08	0.00	0.17	0.00	0.28	0.00	0.12	0.00	0.28	0.00	0.18	0.00	0.06	0.00	0.15	0.00	0.34	0.01

Notes:

Panel-I: this Panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (28) = 3789.29; Prob > chi2 = 0.00; Log likelihood = -12579.9; Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 543.74 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (56, 1040) = 14.64; Prob > F = 0.00.*

Panel-II: this Panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(28, 500)=10.69, P > F = 0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 543.74 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. no. of Obs = 5318; Design df = 527; F(56, 472) = 89.83; Prob > F = 0.00.*

Panel-III: this Panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(28, 547) = 21.84, P>F=0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 543.74 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(56,519) = 11.77; Prob > F = 0.00*

Table 8.3: Determinants of Women's autonomy in Economic Decision-making (Travel and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.04	1.24	0.13	1.00	0.98	1.64	0.00	1.61	0.00	1.17	0.49	1.07	0.61	1.10	0.55	0.93	0.66
Household Size	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.78	0.00	0.70	0.00	0.78	0.08	0.77	0.05	0.67	0.01	0.80	0.35	0.79	0.01	0.71	0.00	0.79	0.08
	Above Average	0.58	0.00	0.55	0.00	0.94	0.06	0.55	0.00	0.43	0.00	0.59	0.00	0.58	0.00	0.60	0.00	0.80	0.18
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.78	0.00	0.72	0.00	0.87	0.41	0.89	0.27	0.77	0.15	0.66	0.18	0.69	0.00	0.67	0.00	0.99	0.90
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.30	0.00	0.16	0.00	0.16	0.01	0.50	0.58	0.12	0.06	0.39	0.09	0.25	0.00	0.16	0.00	0.53	0.03
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.10	0.46	1.14	0.28	0.94	0.89	1.16	0.54	1.10	0.69	2.19	0.21	1.10	0.52	1.17	0.27	0.80	0.63
	25-29 years	1.67	0.00	1.64	0.12	1.27	0.60	2.21	0.00	1.89	0.18	3.42	0.04	1.50	0.17	1.56	0.12	0.96	0.94
	30-34 years	1.97	0.00	2.05	0.00	1.12	0.81	2.58	0.00	2.27	0.14	3.48	0.04	1.80	0.00	2.01	0.00	0.74	0.57
	35-39 years	2.67	0.00	2.60	0.00	1.54	0.37	2.90	0.00	2.46	0.00	4.06	0.03	2.69	0.00	2.74	0.00	1.18	0.75
	40-44 years	3.06	0.00	2.66	0.00	2.03	0.09	3.28	0.00	2.82	0.00	4.00	0.03	3.14	0.00	2.65	0.00	1.88	0.10
	45-49 years	3.27	0.00	2.97	0.00	1.97	0.10	3.14	0.00	2.50	0.00	4.72	0.01	3.59	0.00	3.41	0.00	1.60	0.35

…continue

Table 8.3 (…continued): Determinants of Women's autonomy in Economic Decision-making (Travel and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.34	0.00	1.29	0.00	1.29	0.08	1.05	0.69	1.14	0.30	0.88	0.62	1.53	0.00	1.36	0.01	1.56	0.01
	8-years education	1.17	0.17	1.17	0.20	1.19	0.42	0.88	0.41	0.98	0.92	0.82	0.50	1.47	0.04	1.26	0.19	1.68	0.11
	10-12years education	1.21	0.09	1.01	0.96	1.93	0.00	0.94	0.65	1.36	0.04	1.93	0.01	1.65	0.01	1.58	0.02	1.52	0.12
	Higher education	1.13	0.37	0.90	0.46	2.33	0.00	0.89	0.50	0.72	0.15	1.90	0.04	1.64	0.06	1.45	0.15	1.86	0.23
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.02	0.72	1.07	0.34	0.88	0.35	1.25	0.08	1.32	0.03	0.97	0.91	0.92	0.27	0.96	0.64	0.83	0.25
	8-years education	0.92	0.32	0.81	0.12	1.34	0.10	1.02	0.88	0.91	0.51	1.29	0.41	0.86	0.16	0.77	0.13	1.31	0.21
	10-12years education	1.01	0.87	0.95	0.52	1.15	0.37	1.08	0.55	1.08	0.57	0.99	0.97	0.96	0.66	0.86	0.17	1.25	0.24
	Higher education	1.05	0.62	1.06	0.54	0.92	0.68	1.07	0.66	1.06	0.70	0.99	0.99	1.09	0.48	1.14	0.31	0.81	0.44
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.24	0.00	1.35	0.00	0.80	0.12	1.18	0.19	1.29	0.18	0.77	0.22	1.26	0.00	1.34	0.00	0.84	0.17
	High income	1.51	0.01	1.71	0.00	0.77	0.28	1.54	0.12	1.69	0.01	0.83	0.51	1.54	0.05	1.95	0.02	0.57	0.24
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.84	0.12	0.83	0.12	0.98	0.87	0.83	0.22	0.83	0.21	0.99	0.98	0.82	0.12	0.82	0.13	0.93	0.65
	High income	1.75	0.00	1.45	0.00	1.19	0.20	0.81	0.14	0.72	0.13	1.34	0.23	1.69	0.00	1.53	0.00	1.06	0.70
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.64	0.00	1.01	0.92	0.13	0.00	0.54	0.00	0.85	0.30	0.19	0.00	0.74	0.03	1.15	0.36	0.07	0.00
	NWFP	0.96	0.71	1.46	0.01	0.26	0.00	0.75	0.03	1.13	0.58	0.30	0.00	1.04	0.75	1.57	0.01	0.25	0.00
	Baluchistan	0.19	0.00	0.26	0.00	0.25	0.00	0.21	0.00	0.33	0.00	0.10	0.00	0.19	0.00	0.24	0.00	0.32	0.02

Notes:

Panel-I: this Panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (26) = 1662.41; Prob > chi2 = 0.0000; Log likelihood = -11234.478; Pseudo R2 = 0.0689. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 539.01 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (52, 1050) = 13.21; Prob > F = 0.00.*

Panel-II: this Panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(26, 502)=7.45, P > F = 0.00. Pseudo R2 = 0.0689. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 539.01 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(52, 476) = 7.32; Prob > F = 0.00.*

Panel-III: this Panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(26, 549) = 11.79, P>F=0.00. Pseudo R2 = 0.0689. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 539.01 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(52,523) = 10.42; Prob > F = 0.00*

Table 8.3.1: Determinants of Women's autonomy in Economic Decision-making (Travel and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.20	0.07	1.20	0.14	1.01	0.95	1.60	0.00	1.57	0.00	1.18	0.47	1.03	0.84	1.04	0.79	0.94	0.73
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.67	0.00	0.56	0.00	0.69	0.01	0.65	0.00	0.54	0.00	0.78	0.28	0.67	0.00	0.55	0.00	0.65	0.02
	Above Average	0.53	0.00	0.45	0.00	0.80	0.08	0.53	0.00	0.41	0.00	0.63	0.02	0.50	0.00	0.45	0.00	0.95	0.74
Household Size: Children	Boy/Girl	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No child	0.94	0.49	0.90	0.19	1.28	0.18	0.85	0.28	0.83	0.25	1.17	0.60	1.01	0.95	0.94	0.54	1.40	0.16
	Boys/Girls (both)	1.13	0.04	1.13	0.05	0.99	0.92	1.25	0.01	1.24	0.04	1.02	0.89	1.05	0.50	1.07	0.37	0.94	0.69
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.86	0.05	0.84	0.04	0.89	0.54	0.93	0.54	0.85	0.29	0.71	0.22	0.80	0.01	0.81	0.04	0.99	0.97
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.33	0.01	0.18	0.00	0.43	0.01	0.49	0.56	0.11	0.05	0.38	0.08	0.29	0.00	0.19	0.00	0.50	0.01
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	0.97	0.83	0.98	0.86	1.05	0.91	0.98	0.94	0.90	0.63	2.43	0.18	1.01	0.94	1.04	0.80	0.93	0.87
	25-29 years	1.32	0.03	1.22	0.13	1.54	0.34	1.62	0.04	1.29	0.28	4.05	0.03	1.26	0.13	1.22	0.21	1.23	0.66
	30-34 years	1.41	0.01	1.35	0.04	1.42	0.47	1.69	0.04	1.35	0.23	4.31	0.03	1.37	0.06	1.39	0.06	0.99	0.99
	35-39 years	1.92	0.00	1.73	0.00	1.91	0.18	1.98	0.01	1.54	0.08	4.90	0.02	2.02	0.00	1.91	0.00	1.52	0.41
	40-44 years	2.48	0.00	2.06	0.00	2.40	0.06	2.52	0.00	2.11	0.00	4.34	0.03	2.68	0.00	2.14	0.00	2.36	0.08
	45-49 years	2.88	0.00	2.53	0.00	2.28	0.07	2.61	0.00	2.06	0.01	4.85	0.02	3.36	0.00	3.04	0.00	2.06	0.13

…continue

Table 8.3.1 (…continued): Determinants of Women's autonomy in Economic Decision-making (Travel and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.36	0.00	1.31	0.00	1.29	0.07	1.08	0.55	1.19	0.18	0.87	0.57	1.54	0.00	1.36	0.01	1.59	0.01
	8-years education	1.20	0.11	1.19	0.16	1.20	0.42	0.90	0.50	1.00	1.00	0.81	0.47	1.53	0.02	1.30	0.13	1.68	0.10
	10-12years education	1.26	0.04	1.04	0.73	1.93	0.00	0.97	0.81	1.32	0.07	1.90	0.01	1.75	0.00	1.69	0.01	1.49	0.15
	Higher education	1.20	0.20	0.96	0.79	2.28	0.00	0.95	0.77	0.78	0.17	1.86	0.05	1.72	0.04	1.55	0.11	1.80	0.24
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.56	1.09	0.22	0.88	0.33	1.25	0.07	1.32	0.03	0.97	0.91	0.94	0.40	0.99	0.88	0.83	0.25
	8-years education	0.93	0.40	0.82	0.13	1.33	0.11	1.03	0.84	0.91	0.53	1.31	0.39	0.87	0.20	0.78	0.12	1.31	0.21
	10-12years education	1.04	0.61	0.98	0.83	1.13	0.43	1.12	0.39	1.13	0.37	0.98	0.96	0.98	0.84	0.89	0.29	1.24	0.26
	Higher education	1.08	0.43	1.10	0.32	0.91	0.63	1.13	0.44	1.12	0.44	0.98	0.93	1.11	0.41	1.17	0.22	0.81	0.43
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.02	1.23	0.00	0.84	0.12	1.06	0.54	1.13	0.21	0.82	0.35	1.18	0.02	1.25	0.00	0.86	0.26
	High income	1.44	0.02	1.62	0.01	0.80	0.36	1.37	0.11	1.49	0.06	0.88	0.66	1.56	0.05	1.95	0.02	0.59	0.28
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.91	0.20	0.91	0.22	0.95	0.75	0.93	0.60	0.95	0.72	0.91	0.76	0.89	0.15	0.89	0.19	0.94	0.70
	High income	1.87	0.08	1.21	0.02	1.13	0.37	1.00	0.99	0.95	0.71	1.15	0.59	1.79	0.02	1.33	0.00	1.04	0.78
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.63	0.00	1.00	0.99	0.13	0.00	0.51	0.00	0.81	0.17	0.20	0.00	0.74	0.03	1.16	0.33	0.07	0.00
	NWFP	0.93	0.53	1.42	0.01	0.25	0.00	0.70	0.06	1.04	0.84	0.32	0.00	1.03	0.84	1.56	0.01	0.24	0.00
	Baluchistan	0.19	0.00	0.25	0.00	0.25	0.00	0.20	0.00	0.30	0.00	0.11	0.00	0.19	0.00	0.24	0.00	0.31	0.02

Notes:

Panel-I: this Panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (28) = 1726.98; Prob > chi2 = 0.00; Log likelihood = -11202.191; Pseudo R2 = 0.0716. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 585.39 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (56, 1040) = 13.18; Prob > F = 0.00.*

Panel-II: this Panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(28, 500)=6.95, P > F = 0.00. Pseudo R2 = 0.0716. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 585.39 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(56, 472) = 7.09; Prob > F = 0.00.*

Panel-III: this Panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(28, 547) = 11.44, P>F=0.00. Pseudo R2 = 0.0716. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 585.39 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(56,519) = 10.21; Prob > F = 0.00*

Table 8.4: Determinants of Women's autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.22	0.06	1.18	0.20	1.10	0.40	1.68	0.00	1.67	0.00	1.23	0.24	1.02	0.88	1.03	0.87	0.99	0.92
Household Size	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.81	0.01	0.69	0.00	0.77	0.02	0.72	0.01	0.64	0.00	0.92	0.66	0.87	0.00	0.70	0.00	0.68	0.01
	Above Average	0.57	0.00	0.51	0.00	0.92	0.03	0.56	0.00	0.40	0.00	0.66	0.01	0.57	0.00	0.56	0.00	0.90	0.44
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.85	0.02	0.76	0.00	1.20	0.19	0.96	0.71	0.73	0.03	0.64	0.02	0.76	0.00	0.75	0.01	0.98	0.91
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.20	0.00	0.12	0.00	0.83	0.04	0.50	0.58	0.12	0.06	0.39	0.09	0.28	0.00	0.15	0.00	0.51	0.01
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.22	0.62	1.23	0.43	1.08	0.83	1.23	0.34	1.16	0.54	1.34	0.55	1.25	0.13	1.27	0.34	1.02	0.96
	25-29 years	1.75	0.00	1.67	0.13	1.36	0.37	1.93	0.12	1.72	0.58	1.67	0.24	1.71	0.00	1.65	0.00	1.28	0.56
	30-34 years	2.08	0.00	2.09	0.00	1.26	0.51	2.39	0.00	2.04	0.16	1.93	0.14	1.97	0.00	2.14	0.00	0.94	0.89
	35-39 years	2.79	0.00	2.71	0.00	1.52	0.25	3.10	0.00	2.60	0.00	2.25	0.08	2.65	0.00	2.78	0.00	1.16	0.74
	40-44 years	3.45	0.00	2.79	0.00	2.12	0.03	3.79	0.00	2.83	0.00	2.72	0.02	3.25	0.00	2.75	0.00	1.78	0.08
	45-49 years	3.27	0.00	2.97	0.00	1.81	0.09	2.90	0.00	2.21	0.00	2.38	0.06	3.57	0.00	3.46	0.00	1.55	0.31

…continue

Table 8.4 (…continued): Determinants of Women's autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Regions***						***Panel-III: Rural Regions***					
				Multinomial Logit						***Multinomial Logit***						***Multinomial Logit***			
		Ordered Logit[1]		Partial to no autonomy[2]		Strong to partial autonomy[2]		Ordered Logit[1]		Partial to no autonomy[2]		Strong to partial autonomy[2]		Ordered Logit[1]		Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.28	0.00	1.16	0.07	1.32	0.02	1.05	0.65	1.09	0.47	0.96	0.83	1.37	0.00	1.16	0.18	1.48	0.02
	8-years education	1.22	0.08	1.16	0.29	1.23	0.27	0.94	0.68	1.00	0.98	0.91	0.69	1.37	0.08	1.16	0.40	1.49	0.18
	10-12years education	1.37	0.00	1.13	0.31	1.65	0.00	1.03	0.80	0.83	0.22	1.46	0.06	1.69	0.00	1.64	0.01	1.38	0.15
	Higher education	1.28	0.06	0.96	0.74	1.97	0.00	1.00	0.98	0.79	0.18	1.50	0.07	1.38	0.20	1.15	0.58	1.70	0.22
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.54	1.06	0.46	1.05	0.97	1.17	0.21	1.16	0.30	1.07	0.70	0.97	0.69	1.00	0.96	0.95	0.71
	8-years education	0.97	0.77	0.83	0.13	1.34	0.04	0.95	0.70	0.84	0.27	1.13	0.55	0.96	0.69	0.81	0.15	1.41	0.06
	10-12years education	1.00	0.97	0.87	0.12	1.26	0.07	1.01	0.94	0.98	0.87	1.04	0.84	0.96	0.68	0.79	0.14	1.42	0.03
	Higher education	1.01	0.94	1.03	0.78	0.97	0.81	0.96	0.73	0.98	0.87	0.94	0.77	1.07	0.55	1.11	0.40	0.93	0.75
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.31	0.00	1.41	0.00	0.92	0.38	1.21	0.34	1.38	0.00	0.83	0.23	1.31	0.00	1.36	0.00	0.97	0.79
	High income	1.59	0.00	1.60	0.01	1.04	0.83	1.51	0.03	1.36	0.16	1.17	0.48	1.62	0.03	2.32	0.01	0.57	0.17
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.89	0.10	0.86	0.14	1.03	0.82	0.91	0.50	0.90	0.45	1.02	0.92	0.85	0.16	0.84	0.16	0.97	0.81
	High income	0.82	0.81	0.76	0.34	1.14	0.25	0.94	0.60	0.85	0.24	1.18	0.38	0.72	0.00	0.70	0.22	0.98	0.92
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.74	0.00	1.15	0.16	0.36	0.00	0.79	0.10	1.05	0.75	0.60	0.01	0.66	0.00	1.21	0.17	0.11	0.00
	NWFP	0.91	0.37	1.72	0.00	0.20	0.00	0.72	0.07	1.28	0.31	0.25	0.00	0.96	0.77	1.84	0.00	0.18	0.00
	Baluchistan	0.20	0.00	0.31	0.00	0.18	0.00	0.25	0.00	0.43	0.00	0.11	0.00	0.18	0.00	0.28	0.00	0.20	0.00

Notes:

Panel-I: this Panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (26) = 1848.18; Prob > chi2 = 0.0000; Log likelihood = -12107.477; Pseudo R2 = 0.0709. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 588.15 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (52, 1050) = 12.77; Prob > F = 0.00.*

Panel-II: this Panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(26, 502)=8.30, P > F = 0.00. Pseudo R2 = 0.0709. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 588.15 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F (52, 476) = 68.41; Prob > F = 0.00.*

Panel-III: this Panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(26, 549) = 12.30, P>F=0.00. Pseudo R2 = 0.0709. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 588.15 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (52,523) = 10.30; Prob > F = 0.00*

Table 8.4.1: Determinants of Women's autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		*Panel-I: Overall*						*Panel-II: Urban Regions*						*Panel-III: Rural Regions*					
		Ordered Logit[1]		*Multinomial Logit*				Ordered Logit[1]		*Multinomial Logit*				Ordered Logit[1]		*Multinomial Logit*			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.19	0.10	1.13	0.32	1.11	0.37	1.65	0.00	1.62	0.00	1.24	0.23	0.98	0.86	0.98	0.88	0.99	0.93
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.73	0.00	0.61	0.00	0.81	0.06	0.74	0.02	0.59	0.00	0.84	0.34	0.72	0.00	0.60	0.00	0.77	0.09
	Above Average	0.54	0.00	0.44	0.00	0.84	0.08	0.60	0.00	0.40	0.00	0.65	0.00	0.49	0.00	0.45	0.00	0.96	0.78
Household Size: Children	Boy/Girl	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No child	0.86	0.08	0.84	0.04	1.11	0.50	0.73	0.03	0.75	0.07	1.17	0.60	0.98	0.82	0.90	0.29	1.39	0.11
	Boys/Girls (both)	1.11	0.08	1.11	0.11	1.01	0.94	1.25	0.01	1.23	0.07	1.02	0.89	1.02	0.78	1.06	0.50	0.94	0.67
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.91	0.09	0.86	0.09	1.16	0.29	0.92	0.46	0.79	0.08	0.74	0.06	0.88	0.06	0.88	0.07	1.06	0.75
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.22	0.00	0.14	0.00	0.84	0.04	0.49	0.56	0.11	0.05	0.38	0.08	0.32	0.00	0.18	0.00	0.48	0.00
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.06	0.65	1.04	0.73	1.13	0.73	1.02	0.94	0.92	0.74	2.42	0.18	1.14	0.36	1.12	0.44	1.15	0.73
	25-29 years	1.36	0.01	1.23	0.12	1.48	0.25	1.36	0.13	1.14	0.60	4.05	0.12	1.43	0.02	1.28	0.10	1.54	0.30
	30-34 years	1.47	0.00	1.36	0.03	1.41	0.33	1.53	0.05	1.16	0.54	4.32	0.16	1.51	0.01	1.48	0.03	1.16	0.72
	35-39 years	1.97	0.00	1.77	0.00	1.68	0.15	2.03	0.00	1.55	0.09	4.91	0.02	2.00	0.00	1.91	0.00	1.41	0.45
	40-44 years	2.72	0.00	2.11	0.00	2.27	0.02	2.73	0.00	2.02	0.01	4.35	0.03	2.79	0.00	2.19	0.00	2.18	0.07
	45-49 years	2.78	0.00	2.48	0.00	1.89	0.07	2.21	0.00	1.73	0.06	4.86	0.02	3.36	0.00	3.05	0.00	1.96	0.12

…continue

Table 8.4.1 (…continued): Determinants of Women's autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Regions						Panel-III: Rural Regions					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.30	0.00	1.18	0.05	1.32	0.02	1.08	0.51	1.15	0.29	0.87	0.57	1.38	0.00	1.17	0.17	1.50	0.02
	8-years education	1.25	0.07	1.18	0.23	1.23	0.26	0.97	0.85	1.03	0.89	0.81	0.47	1.42	0.07	1.20	0.31	1.49	0.18
	10-12years education	1.43	0.00	1.17	0.17	1.64	0.00	1.07	0.60	0.87	0.35	1.90	0.01	1.79	0.00	1.75	0.00	1.36	0.18
	Higher education	1.35	0.03	1.03	0.85	1.95	0.00	1.07	0.68	0.88	0.47	1.84	0.05	1.43	0.18	1.22	0.46	1.67	0.24
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.05	0.45	1.08	0.32	1.08	0.99	1.16	0.23	1.16	0.31	0.98	0.93	0.98	0.84	1.02	0.81	0.95	0.71
	8-years education	0.98	0.79	0.84	0.15	1.33	0.04	0.95	0.70	0.84	0.29	1.32	0.39	0.97	0.76	0.83	0.17	1.41	0.06
	10-12years education	1.02	0.84	0.90	0.23	1.24	0.09	1.04	0.79	1.02	0.90	0.99	0.97	0.98	0.83	0.82	0.16	1.42	0.04
	Higher education	1.03	0.75	1.06	0.52	0.96	0.76	1.00	1.00	1.04	0.81	0.97	0.93	1.09	0.49	1.14	0.32	0.92	0.73
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.21	0.00	1.27	0.00	0.95	0.60	1.09	0.37	1.20	0.07	0.82	0.36	1.23	0.00	1.25	0.00	1.01	0.95
	High income	1.50	0.01	1.51	0.02	1.07	0.72	1.33	0.15	1.19	0.44	0.88	0.68	1.65	0.03	2.29	0.01	0.61	0.23
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.97	0.62	0.95	0.48	1.01	0.95	1.01	0.94	1.04	0.78	0.91	0.75	0.92	0.34	0.92	0.34	0.96	0.77
	High income	0.97	0.66	0.92	0.29	1.10	0.42	1.15	0.23	1.14	0.29	1.15	0.59	0.82	0.04	0.82	0.17	0.94	0.70
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.73	0.00	1.14	0.21	0.36	0.00	0.77	0.06	0.99	0.96	0.20	0.00	0.65	0.00	1.22	0.16	0.10	0.00
	NWFP	0.87	0.22	1.66	0.00	0.19	0.00	0.67	0.03	1.17	0.50	0.32	0.00	0.94	0.67	1.82	0.00	0.18	0.00
	Baluchistan	0.20	0.00	0.30	0.00	0.18	0.00	0.23	0.00	0.38	0.00	0.11	0.00	0.18	0.00	0.27	0.00	0.20	0.00

Notes:

Panel-I: this Panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (28) = 1905.40; Prob > chi2 = 0.00; Log likelihood = -12078.86; Pseudo R2 = 0.0731. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 632.41 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (56, 1040) = 12.07; Prob > F = 0.00.*

Panel-II: this Panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(28, 500)=8.14, P > F = 0.00. Pseudo R2 = 0.0731. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 632.41 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(56, 472) = 71.19; Prob > F = 0.00.*

Panel-III: this Panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(28, 547) = 11.30, P>F=0.00. Pseudo R2 = 0.0731. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 632.41 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(56,519) = 9.81; Prob > F = 0.00*

CHAPTER 9

FAMILY PLANNING DECISION-MAKING AUTONOMY: AGGREGATED RESULTS

9.1. Introduction

The family planning sphere of decision-making is another important aspect of women's autonomy in the household. The family planning autonomy is an aggregated index comprising of two components, described as '*having more children'* and '*using contraceptive measures'*. Similar to the economic decision-making autonomy as observed in Chapter 7, we extend the empirical analysis to investigate the role of the threat options and other determinants as they relate to women's autonomy in family planning-related decisions, from the overall sample as well as the urban and rural regions. It should be noted that a large portion of the discussion in this Chapter may appear similar to Chapter 7 as we maintained consistency for purposes of empirical settings. However, we highlight those results which appear distinctively different within the context of family planning autonomy. The next Section discusses the results of correlation between the threat options and family planning autonomy. Section 9.3 presents evidence on the role of individual characteristics, while the following two Sections look specifically at family income and fixed state effects. Concluding remarks are made in Section 9.6. In the next Chapter we discuss results of each of the sub-dimensions of family planning autonomy.

9.2. Threat Options and Family Planning Decision-making Autonomy

Table 9.1 at the end of this Chapter presents results of the family planning decision-making autonomy model (Equation 5.6) calculated using the conventional ordered logit and multinomial logit approaches, from the overall sample as well as the urban and the rural regions.[2]

Table 9.1 (*Panel-I*) depicts that an '*earned income*' has 1.39 times greater odds for *'partial'* over *'no'* autonomy, however, it appears insignificant in terms of influencing '*partial'* to *'strong'* autonomy in family planning-related decisions from the overall sample. Within the urban regions (*Panel-II*), the employed status of women appears unrelated to any level of family planning autonomy.

[2] The proportionality or the parallel line assumption assumes that the partial effects of the relevant independent variables remain constant across adjacent categories of the dependent variable. However, the results show that the above assumption is violated therefore we rely on the multinomial logit specifications in this analysis: Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 430.87 Prob > chi2 = 0.00.

However, in the rural regions, having an '*employed*' status has greater odds of 1.47 times for *'partial'* over *'no'* autonomy (*Panel-III).* These results are a clear contrast from the evidence we witnessed in women's economic decision-making autonomy. Again we find that the regional divide exists in the analysis of women's autonomy in Pakistan.

Corresponding to the threat option of household size, Table 9.1 (*Panel-I*) shows that increasing household size (all formulations) significantly decreases women's autonomy related to family planning. The '*average'* sized household has lower odds of 0.84 times for *'partial'* to *'no'* autonomy compared with '*below average'* sized households from the overall sample. The results from the urban and rural regions, however (respectively *Panel-II* and *Panel-III*), do not appear consistent with the overall evidence. Unlike the aggregated household size, the size (exclusive of children) appears inversely related to women's autonomy in the household. Table 9.1.1 (*Panel-I*) at the end of this Chapter shows that the size '*above average'* decreases the odds by 0.60 times of *'strong'* to *'partial'* autonomy in the household from the overall sample. Results for the urban and rural regions (*Panel-II* and *Panel-III*) also show similar trends, where '*above average'* sized households decrease autonomy from '*strong'* to '*partial'*.

We examine the effect of extended family systems relative to nuclear family systems in connection with family planning autonomy. Table 9.1 (*Panel-I*) shows that women from the extended family system have 1.26 times greater odds of *'no'* to *'partial'* autonomy from the overall sample, a statistically significant result at the 1 per cent level of confidence. This is not the case for women from the urban regions (*Panel-II*). From the rural regions, however, women in extended family systems appear 1.35 times greater to have *'partial'* to *'no'* autonomy. Results find no influence on women's autonomy in the household, from any of the samples, where the household includes a mother-in-law (*Panel-I* through *to Panel-III*).

Furthermore, children as a component of household composition appear relevant to enhancing women's autonomy in areas of family planning-related decision-making. Using the different formulations, we investigate the role of an increasing number and gender bias of children in association with the women's family planning autonomy. [4] Given that there may not be a direct relationship between various formulations of children influencing a woman's autonomy in family planning decision-making aspects, they are treated as a threat option available to a woman in relation to her husband, which can affect her autonomy as observed in the sphere of economic decision-making.

[4] Formulations of children are: ***i)*** one child (boy/girl) as a reference category versus no child and children of both genders; ***ii)*** no child as a reference category versus only boy, girl and both genders; ***iii)*** no child as a reference category versus only boys, only girls, equal number of boys and girls, number of girls greater than boys and boys greater than girls, and ***iv)*** equal number of boys and girls as a reference category versus only boys, only girls, girls greater than boys and boys greater than girls.

Table 9.1.1 (*Panel-I*) at the end of this Chapter shows that *'no child'* relative to '*one child'* (any gender) lowers odds by 0.67 times for *'partial'* to *'no'* autonomy from the overall sample. On the other hand '*children*' (both genders) relative to '*one child'* has no impact on increasing levels of autonomy in the household from the overall sample. From the urban regions, however, we witness that *'no child'* relative to '*one child'* only lowers odds by 0.66 times for *'partial'* to *'no'* autonomy, and has an insignificant impact regarding *'strong'* to *'partial'* autonomy. Similarly, we find *'no child'* lowers odds by 0.67 times for *'partial'* to *'no'* autonomy, however, '*children*' (both genders) increases odds by 1.26 times for *'no'* to *'partial'* autonomy from the urban regions (*Panel-II*). Within the rural regions, we find that *'no child'* relative to '*one child'* decreases *'partial'* to *'no'* autonomy (*Panel-III*).

Appendix Table 9.1.2[6] corresponds to the specification where *'no child'* appears as the reference category to investigate if '*boys*', '*girls*' or '*children*' (both genders) are associated with household autonomy. Results from the overall sample (*Panel-I*) show that *boys*', '*girls*' or '*children*' (both genders) relative to *'no child'* respectively show 1.51, 1.46 and 1.63 times greater odds of *'partial'* to *'no'* autonomy in the household. However, these results are not found consistent with the *'strong'* to *'partial'* autonomy from the overall sample. Further, we observe all of the formulations of children relative to *'no child'* consistently significant for the overall sample, as well as the urban (*Panel-II*) and rural (*Panel-III*) regions.

Similarly, Table 9.1.3 (*Panel-I*) presents results of the other specifications; '*boys*', '*girls*', '*equal number of boys and girls*' and having '*greater numbers of one gender over the other*', relative to *'no child'* in association with women's autonomy in the household. Greater odds were found for each category, respectively 1.51, 1.46, 1.57, 1.67, 1.68 times for *'no'* to *'partial'* autonomy in the household. Interestingly we find similar results from the urban (*Panel-II*) and rural regions (*Panel-III*). However, they were found to be inconsistent with increasing *'partial'* to '*strong'* autonomy from any of the samples.

Table 9.1.4 presents the specification in which '*equal number of boys and girls*' is considered as the reference category in comparison with having '*no child*', *boys*', '*girls*' and having '*greater numbers of one gender over the other*'. The results from the overall sample show that having *'no child'* compared with the above reference category lowers odds 0.64 times for *'partial'* to *'no'* autonomy, however, all other categories had a statistically insignificant effect on any level of autonomy. These results are consistent with the evidence from the urban regions (*Panel-II*) and rural regions (*Panel-III*). In another specification presented in Table 9.1.5 where the reference category is '*girls greater than boys'*, having *'no child'* lowers odds by 0.60 and 0.47 and 0.64 times for *'partial'* to *'no'* autonomy from the overall, urban and rural samples respectively. Finally we find that an increasing number of

[6] All tables from Appendix Table 9.1.2 to Appendix Table 9.1.5 are presented in Appendix-IV: Determinants of Women's autonomy in Family Planning Decision-making.

children, regardless of gender, also increases women's *'partial'* autonomy although remains irrelevant to the *'strong'* autonomy in the overall sample as well as in the urban regions. Further, we find that having an '*equal number of boys and girls*' also significantly increases women's autonomy in the household.

9.3. Individual Characteristics and Family Planning Decision-making Autonomy

Assessing individual characteristics involves an investigation into the role of education and age in association with a woman's autonomy in family planning aspects of decision-making. In addition to a woman's education and age, we consider her husband's level of education and his financial position as a part of her own individual characteristics. Regarding a woman's education we attempt to observe its effect through four different specifications of education in association with her autonomy in the household.[8]

Table 9.1 presents results of the specification of '*5-years'* schooling through to '*higher levels of education'* compared with the base category of '*no education'*. Results show greater odds for the three categories from '*8-years'* through to '*higher levels of education'* of 1.56, 1.59 and 2.15 times respectively, for *'no'* to *'partial'* autonomy from the overall sample. Comparative results from the urban regions (*Panel-II*) show greater odds also of 1.65, 1.55 and 1.82 times for *'no'* to *'partial'* autonomy in the household. However, within the rural regions, we observe that '*10-12 years'* and '*higher levels of education'* respectively appear with 1.58 and 3.22 times greater odds of *'partial'* to *'no'* autonomy (*Panel-III*).

Regarding the specification which investigates the effect of a woman's '*education' (*one year or more) with reference to '*no education'* in association with family planning autonomy, the corresponding results show that '*education'* has greater odds of 1.41 times for *'no'* to *'partial'* autonomy in the household from the overall sample. Similarly within the urban regions, '*education'* versus '*no education'* shows 3.52 and 1.42 times greater odds of respectively *'no'* to *'partial'* and *'partial'* to *'strong'* autonomy. Further, comparative results show 1.34 times greater odds of *'partial'* to *'no'* autonomy in the household within the rural regions. With regards to the third specification in which education appears as a continuous variable, results show that for each additional year of education, the odds increase by 1.05 times for *'no'* to *'partial'* autonomy in the household from the overall sample. Correspondingly, the urban regions show increased odds of 1.05 for *'no'* to *'partial'*

[8] The four main classifications of education are: ***i)*** no education as the reference category versus 5-years, 10-years, 12-years and higher levels of education; ***ii)*** no education (never attended school) as a reference category to education (one year school or above); ***iii)*** education considered as a continuous variable ranging from no school to the maximum number of years attending the school and finally, ***iv)*** no education as a reference category and 5-years of schooling, 5-years versus 10 years of schooling, 10-years versus 12-years of schooling and 12-years versus higher levels of schooling. It is appropriate to note that we present results of the first specification only but discuss results of all of the above categories.

autonomy in the household, whereas the rural results show increased odds of 1.05 times for each additional year of education, for *'partial'* to *'no'* autonomy.

Lastly, the fourth specification of education is where we investigate any variation between successive levels of education compared with the preceding level. We found, however, no support for this proposition; each successive level of education was not found to generate greater autonomy compared with the preceding level of education, except when compared to the level of '*no education'*. In summary, these results led us to conclude: ***i)*** a woman with any level of education enjoys relatively greater levels of autonomy in the household compared with women without any education; ***ii)*** education does not improve the likelihood of having *'partial'* to *'strong'* autonomy, on the contrary, in some instances it decreases the likelihood from *'strong'* to *'partial'* autonomy.

The age of a woman is another characteristic usually considered an important determinant of women's autonomy in the household. We construct two different specifications of age to investigate its effect on women's autonomy. The first specification treats the '*15-19 years'* age bracket as a base category compared with six successive age brackets. The second specification considers age as a continuous variable from the minimum '*15 years'* to the maximum '*49 years*' of age. Table 9.1 shows the results of different successive age brackets compared with a relatively young age bracket as a reference category. The results show that all successive age categories from '*20-24 years'* through to '*35-39 years'* compared with the base category of '*15-19 years'* substantially increases having *'no'* to *'partial'* autonomy in the household, from the overall and the urban samples. According to the second specification[9] we observe that every additional year of age generates a corresponding 1.01 times greater odds of *'no'* to *'partial'* autonomy from the overall sample.

We also investigate the role of a husband's characteristics, namely, his education level and financial strength in relation to a wife's autonomy in family planning decision-making spheres. Accordingly, we construct three specifications of a husband's level of education,[10] they are: ***i)*** no education as a base category compared with each of the successive categories including 5-years schooling through to higher levels of education, ***ii)*** no education as the base category compared with any level of education and ***iii)*** the effect of every additional year of education. Table 9.1 shows that '*5-years'* through to '*higher levels of education*' compared with '*no education'* increases *'no'* to *'partial'* autonomy but is ineffective in increasing *'partial'* to *'strong'* autonomy from the overall as well as rural samples. Within the urban regions we find only the '*higher levels of education'* relevant to an increase in *'no'* to *'partial'* autonomy. Consistent with these results, we find a husband with some level of education relative to '*no education'* appears positively associated with an increasing level of women's autonomy, in the overall as well as rural samples.

[9] Results available on request.
[10] Results available on request.

A husband's financial stability is another characteristic we investigate to determine its relevance to his wife's household autonomy. We classify a husband's income into three main levels; '*low*', '*main*' and '*high*'. For analytical purposes we consider the '*low*' income as a base category and compare it to the '*middle*' and '*high*' categories. Interestingly, results show that the '*middle*' level of income relative to '*low*' income levels increases odds by 1.25 and 1.42 times respectively for *'no'* to *'partial'* and *'partial'* to *'strong'* autonomy within the rural regions. However, the '*high*' income level does not appear to increase women's autonomy within either the urban or rural regions.

9.4. Family Income Status and Family Planning Decision-making Autonomy

Family income refers to the joint financial resources[11] of the household which determines the level of household consumption. Family income also represents a woman's socio-economic status and thereby may play some role in determining the level of women's autonomy in the household. We classify family income into three groups; '*low*', '*middle*' and '*high*' level income groups. We investigate if the '*middle*' and/or the '*high*' income group, compared with the '*low*' income level, increases women's autonomy in the household. Results in Table 9.1 show that a family grouped within the '*high*' income bracket, relative to those in the '*low*' group, have greater odds of 1.27, 1.32 and 1.26 times respectively for *'no'* to *'partial'* autonomy in the household, within the overall, urban and rural samples. However, the '*middle*' group relative to the '*low*' group appears statistically irrelevant in terms of correlation with any level of autonomy.

9.5. States/Provincial Effects and Family Planning Decision-making Autonomy

It has been generally noted that women from different states/provinces of Pakistan show varying degrees of autonomy, dependent perhaps on the strong cultural, traditional and historical backgrounds of each of the provinces. Furthermore, these differences may also be linked to urbanisation and economic opportunities available in each of the provinces. The province of Punjab is usually considered to be multiethnic, economically developed, with relatively high literacy rates and greater prosperity compared with the three other provinces. Therefore, we consider Punjab as a reference category and compare the other three provinces individually to observe variances in women's autonomy. Table 9.1 shows that the province of Sindh compared with Punjab has 1.21 times greater odds of *'no'* to *'partial'* autonomy from the overall sample. The results also show 1.53 times greater odds of *'no'* to *'partial'* autonomy within the rural regions. The province of NWFP, however, demonstrates greater odds of 1.94, 2.74 and 1.94 respectively for *'partial'* to *'no'* autonomy from the overall, urban and rural samples. The third province of Baluchistan shows lower odds of 0.09 times for *'partial'* to *'no'* from the overall, urban and rural samples.

[11] See Chapter 4 for further details on the description of this determinant.

9.6. Concluding Remarks

In this Chapter we discussed the role of the threat options and other determinants on women's autonomy regarding family planning decision-making. Among the threat options discussed, we noticed that employment status increases to *'partial'* autonomy except from within the urban regions. Similarly, household size (exclusive of children) above the *'average'* size leads to a decrease in autonomy from *'strong'* to *'partial'* within the urban as well as rural regions. Regarding the inclusion of children, however, results indicate that an increased number of children, irrespective of gender, can increase women's autonomy. Overall, results of the threat options with respect to family planning decision-making autonomy appear consistent with the results observed in areas of economic decision-making in Chapter 7. The presence of a mother-in-law does not appear to significantly influence a woman's autonomy in either the urban or rural regions, however, extended family formations do diminish autonomy levels from *'partial'* levels in the rural regions.

Regarding the role of education, results show that any level of education compared with '*no education'* assists women to increase their autonomy levels in family planning decision-making processes, in the urban as well as rural regions. Results also indicate that successive age brackets between '*15-19 years*' and '*40-49 years*' increase women's autonomy levels in the rural regions, however, this was not the case for the urban areas. Interestingly, results also show that educated husbands compared with uneducated husbands significantly increase the level of women's autonomy in family planning decision-making aspects. More precisely we find that '*8-years'* and '*higher levels of education*' increase the likelihood of a *'partial'* response over the *'no'* response compared with '*no schooling*'. Along similar lines, results show a husband's income level ('*middle'* income) increases the likelihood of *'partial'* autonomy within the rural regions, and furthermore has the effect of decreasing the likelihood of *'strong'* to *'partial'* autonomy. We also found the family socio-economic status to be significantly associated with increasing levels of family planning autonomy. Results reveal that women from richer families are more likely to have *'partial'* over *'no'* autonomy, and therefore less likely to have *'partial'* over *'strong'* autonomy. These results are statistically significant and mainly consistent with results from the urban and rural regions. We find women from the province of Sindh and NWFP appear to enjoy greater levels of *'partial'* autonomy but are less likely to hold *'strong'* levels compared with women from the province of Punjab. Women from the province of Baluchistan, however, depicted both lower *'partial'* and *'strong'* autonomy levels compared with the reference category of women from Punjab in the overall, as well as the urban and rural regions.

Table 9.1: Determinants of Women's autonomy in Family Planning Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.26	0.04	1.39	0.01	0.84	0.43	1.13	0.51	1.18	0.38	0.96	0.92	1.31	0.06	1.47	0.02	0.77	0.32
Household Size	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.15	0.84	0.08	1.06	0.78	0.93	0.65	0.81	0.23	1.41	0.25	0.84	0.11	0.84	0.16	0.86	0.57
	Above Average	0.98	0.79	0.97	0.69	0.99	0.96	0.95	0.70	0.91	0.50	1.09	0.73	0.97	0.68	0.98	0.81	0.92	0.66
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.18	0.03	1.26	0.01	0.86	0.38	1.00	0.99	1.05	0.78	0.90	0.73	1.26	0.02	1.35	0.01	0.82	0.34
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.99	0.97	0.96	0.90	1.17	0.82	4.54	0.33	1.70	0.66	3.85	0.21	0.74	0.35	0.80	0.52	0.63	0.44
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.47	0.00	1.49	0.00	1.05	0.86	1.06	0.84	1.09	0.74	0.75	0.54	1.61	0.00	1.64	0.00	1.13	0.68
	25-29 years	1.71	0.00	1.81	0.00	0.95	0.82	1.51	0.12	1.62	0.07	0.79	0.53	1.76	0.00	1.89	0.00	0.97	0.91
	30-34 years	1.55	0.00	1.70	0.14	0.76	0.09	1.70	0.15	2.07	0.21	0.57	0.20	1.46	0.23	1.58	0.21	0.81	0.52
	35-39 years	1.73	0.00	1.88	0.00	0.85	0.54	1.90	0.14	2.08	0.17	0.87	0.77	1.61	0.15	1.79	0.00	0.76	0.10
	40-44 years	1.59	0.21	1.70	0.20	0.88	0.61	1.43	0.24	1.50	0.16	0.82	0.65	1.64	0.21	1.79	0.12	0.85	0.61
	45-49 years	1.51	0.31	1.59	0.31	0.90	0.74	1.42	0.27	1.45	0.21	0.83	0.72	1.51	0.18	1.64	0.17	0.82	0.59

Continue…

Table 9.1 (…continued): Determinants of Women's autonomy in Family Planning Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.08	0.42	1.18	0.12	0.71	0.11	1.14	0.37	1.13	0.43	1.07	0.81	1.04	0.75	1.21	0.19	0.48	0.11
	8-years education	1.33	0.01	1.56	0.00	0.72	0.31	1.49	0.02	1.65	0.01	0.94	0.88	1.13	0.44	1.35	0.14	0.38	0.16
	10-12years education	1.31	0.01	1.59	0.00	0.63	0.19	1.31	0.08	1.55	0.02	0.62	0.21	1.34	0.07	1.58	0.05	0.72	0.44
	Higher education	1.63	0.00	2.15	0.00	1.05	0.91	1.58	0.02	1.82	0.01	1.00	0.99	1.94	0.01	3.22	0.01	1.31	0.75
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.24	0.01	1.23	0.02	1.10	0.56	1.07	0.65	1.15	0.40	0.85	0.59	1.25	0.03	1.21	0.06	1.20	0.36
	8-years education	1.11	0.28	1.17	0.13	0.79	0.21	0.89	0.50	0.90	0.56	0.89	0.70	1.18	0.13	1.28	0.05	0.71	0.16
	10-12years education	1.21	0.03	1.35	0.00	0.67	0.03	1.03	0.84	1.12	0.53	0.75	0.33	1.24	0.04	1.43	0.00	0.60	0.02
	Higher education	1.23	0.04	1.55	0.00	0.50	0.01	1.15	0.42	1.46	0.05	0.58	0.16	1.13	0.31	1.42	0.03	0.41	0.01
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.17	0.01	1.17	0.14	1.16	0.28	0.96	0.63	1.00	0.98	0.85	0.45	1.29	0.00	1.25	0.01	1.42	0.04
	High income	1.17	0.25	1.41	0.13	0.57	0.21	1.12	0.49	1.82	0.11	0.39	0.08	0.91	0.75	0.88	0.72	0.81	0.79
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.03	0.78	1.05	0.62	0.90	0.55	1.19	0.32	1.09	0.59	1.35	0.34	0.98	0.87	1.04	0.70	0.77	0.22
	High income	1.14	0.08	1.27	0.01	0.70	0.03	1.28	0.10	1.32	0.08	1.02	0.94	1.11	0.25	1.26	0.03	0.59	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.23	0.05	1.21	0.10	1.18	0.38	0.84	0.30	0.79	0.20	1.12	0.68	1.53	0.00	1.53	0.01	1.17	0.53
	NWFP	1.52	0.00	1.94	0.00	0.55	0.00	1.70	0.00	2.74	0.01	0.54	0.07	1.54	0.00	1.94	0.00	0.55	0.02
	Baluchistan	0.09	0.00	0.09	0.00	1.56	0.20	0.13	0.00	0.09	0.00	5.25	0.00	0.09	0.00	0.09	0.00	0.37	0.06

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop no. obs. = 13348; LR chi2 (26) = 2500.72; Prob > chi2 = 0.00; Log likelihood = -8794.144; Pseudo R2 = 0.1245. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 430.87 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop no. obs. = 13348; Design df = 1101; F (52, 1050) = 5.63; Prob > F = 0.00.*

Panel-II: this panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Sub-pop. No. of obs = 5252; Design df=527; F(26, 502)=4.48, P > F = 0.00. Pseudo R2 = 0.1245. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 430.87 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Sub-pop. No. of obs = 5252; Design df = 527; F (52, 476) = 3.90; Prob > F = 0.00.*

Panel-III: this panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 8096; Design df = 574, F(26, 549) = 5.37, P>F=0.00. Pseudo R2 = 0.1245. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 430.87 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 8096; Design df = 574; F (52, 523) = 4.50; Prob > F = 0.00*

Table 9.1.1: Determinants of Women's autonomy in Family Planning Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.06	1.38	0.02	0.80	0.33	1.10	0.61	1.15	0.47	0.94	0.88	1.29	0.08	1.47	0.02	0.72	0.22
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.86	0.09	0.90	0.23	0.79	0.19	0.78	0.09	0.77	0.10	0.84	0.57	0.88	0.22	0.93	0.52	0.75	0.21
	Above Average	0.86	0.05	0.95	0.56	0.60	0.00	0.75	0.02	0.80	0.11	0.63	0.08	0.88	0.19	1.00	0.99	0.56	0.01
Household Size: Children	Boy/Girl	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No child	0.68	0.00	0.67	0.00	0.82	0.40	0.65	0.01	0.66	0.02	0.67	0.35	0.68	0.00	0.67	0.00	0.92	0.75
	Boys/Girls (both)	1.03	0.69	1.10	0.23	0.81	0.13	1.09	0.47	1.26	0.09	0.68	0.12	1.01	0.95	1.03	0.71	0.91	0.54
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.19	0.04	1.17	0.10	1.18	0.37	1.05	0.70	0.99	0.97	1.34	0.36	1.26	0.04	1.25	0.06	1.09	0.71
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.01	0.99	0.96	0.91	1.27	0.72	4.56	0.32	1.73	0.64	3.88	0.25	0.75	0.38	0.79	0.51	0.73	0.60
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.26	0.08	1.26	0.08	0.96	0.87	0.88	0.67	0.90	0.70	0.68	0.42	1.38	0.03	1.40	0.03	1.05	0.87
	25-29 years	1.33	0.03	1.40	0.01	0.81	0.40	1.09	0.76	1.14	0.65	0.68	0.35	1.40	0.03	1.51	0.01	0.81	0.48
	30-34 years	1.14	0.34	1.25	0.13	0.61	0.07	1.14	0.67	1.32	0.35	0.48	0.13	1.10	0.53	1.23	0.23	0.62	0.14
	35-39 years	1.27	0.09	1.38	0.04	0.71	0.21	1.27	0.48	1.32	0.42	0.76	0.58	1.23	0.19	1.39	0.06	0.60	0.10
	40-44 years	1.21	0.23	1.24	0.19	0.84	0.52	1.02	0.95	0.99	0.98	0.82	0.71	1.27	0.18	1.37	0.11	0.75	0.39
	45-49 years	1.16	0.35	1.16	0.37	0.93	0.82	1.04	0.92	0.97	0.93	0.88	0.85	1.19	0.36	1.25	0.25	0.80	0.52

continue…

Table 9.1.1 (…continued): Determinants of Women's autonomy in Family Planning Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.08	0.40	1.18	0.11	0.71	0.11	1.17	0.30	1.15	0.35	1.08	0.80	1.04	0.76	1.21	0.18	0.48	0.12
	8-years education	1.34	0.01	1.57	0.00	0.72	0.30	1.52	0.02	1.71	0.01	0.94	0.87	1.12	0.46	1.35	0.15	0.38	0.16
	10-12years education	1.31	0.01	1.59	0.00	0.63	0.18	1.32	0.08	1.59	0.01	0.61	0.19	1.36	0.06	1.58	0.05	0.76	0.51
	Higher education	1.68	0.00	2.23	0.00	1.04	0.92	1.67	0.01	1.98	0.00	0.99	0.98	1.94	0.00	3.26	0.01	1.32	0.75
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.25	0.01	1.23	0.02	1.12	0.50	1.07	0.69	1.13	0.43	0.85	0.58	1.25	0.02	1.21	0.06	1.22	0.32
	8-years education	1.12	0.22	1.17	0.12	0.82	0.30	0.91	0.61	0.92	0.64	0.91	0.77	1.18	0.11	1.28	0.05	0.74	0.21
	10-12years education	1.23	0.02	1.36	0.00	0.71	0.05	1.06	0.71	1.15	0.44	0.76	0.37	1.25	0.03	1.42	0.00	0.63	0.03
	Higher education	1.25	0.03	1.56	0.00	0.53	0.02	1.20	0.31	1.52	0.04	0.60	0.19	1.14	0.29	1.41	0.03	0.43	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.06	1.11	0.13	1.13	0.35	0.88	0.19	0.91	0.38	0.81	0.35	1.26	0.00	1.21	0.03	1.40	0.05
	High income	1.12	0.41	1.34	0.20	0.58	0.22	1.04	0.83	1.65	0.10	0.39	0.08	0.89	0.67	0.84	0.63	0.88	0.87
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.04	0.63	1.07	0.44	0.89	0.52	1.22	0.25	1.14	0.44	1.30	0.40	1.00	1.00	1.06	0.57	0.77	0.24
	High income	1.20	0.02	1.35	0.00	0.69	0.02	1.34	0.04	1.44	0.02	0.95	0.85	1.17	0.08	1.34	0.01	0.60	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.24	0.04	1.22	0.10	1.20	0.34	0.84	0.28	0.78	0.19	1.12	0.70	1.56	0.00	1.55	0.00	1.21	0.45
	NWFP	1.51	0.00	1.92	0.00	0.57	0.01	1.68	0.01	2.70	0.01	0.55	0.08	1.54	0.00	1.92	0.00	0.58	0.02
	Baluchistan	0.09	0.00	0.09	0.00	1.57	0.19	0.13	0.00	0.09	0.00	5.48	0.00	0.09	0.00	0.09	0.00	0.38	0.07

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; LR chi2 (28) = 2534.60; Prob > chi2 = 0.00; Log likelihood = -8777.20; Pseudo R2 = 0.1262. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 441.61 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; Design df = 1101; F (56, 1046) = 6.09; Prob > F = 0.00.*

Panel-II: this panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Subpop. No. of obs = 5252; Design df=527; F(28, 500) = 5.10, P > F = 0.00. Pseudo R2 = 0.1262. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 441.61 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Subpop. No. of obs = 5252; Design df = 527; F(56, 472) = 4.40; Prob > F = 0.00.*

Panel-III: this panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. no. of obs = 8096; Design df = 574, F(28, 547) = 5.31, P>F=0.00. Pseudo R2 = 0.1262. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 441.61 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (56, 519) = 4.72; Prob > F = 0.00*

CHAPTER 10

FAMILY PLANNING AUTONOMY:

DISAGGREGATED RESULTS

10.1. Introduction

This Chapter presents the disaggregated results of women's autonomy in family planning decision-making spheres. The disaggregated analysis corresponds to the sub-dimensions of family planning autonomy, involving aspects of '*having more children*' (to have a child or additional children) and '*using contraceptive measures*'. We replicate the analysis along similar lines discussed in Chapter 9, investigating the role of the threat options including other common determinants of family planning autonomy. We reproduce this analysis for the overall sample as well as the urban and rural regions. The Chapter is therefore comprised of two main Sections analysing women's decision-making autonomy in relation to having more children and using contraceptive measures.

10.2. Women's Autonomy Related to Having More Children

This sub-dimension of family planning related decision-making refers to whether a woman has any power, relative to her husband or other family members, to make the decision to have one or more children. It is relevant to note that the data used in this research allows us to identify who makes this decision, for example, a husband or wife or a husband and wife jointly. A further response option provided for the situation where no decision was made, because having children was considered a natural process.[1]

Table 10.1 at the end of this Chapter presents results of the above sub-dimension of family planning estimated by the conventional ordered logit and multinomial logit approaches from the overall sample as well as the urban and rural regions.[2] We investigate the varying

[1] It is associated with a strong belief that having an additional child is ultimately in the hands of God.

[2] Results of the ordered logit model are not consistent with results of the multinomial logit which indicates violation of the parallel line assumption. Therefore we rely on the multinomial logit specifications for analysis: approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 621.83 Prob > chi2 = 0.00. See Chapter 5 for further discussion on parallel line assumption and its remedy.

effects of each of the determinants on relative levels of *'partial'* to *'no'* autonomy responses and ''*strong'* to *'partial'* autonomy responses.

Table 10.1 shows that women who are '*employed*' are 1.37 and 1.41 times more likely to respond with *'no' than 'partial'* autonomy compared with '*unemployed*' women, both in the overall sample *(Panel-I)* and the rural regions (*Panel-III*). However, we do not find having an '*employed*' status significantly relevant in determining women's autonomy within the urban regions (*Panel-I*). Similarly we find *'average'* sized households exert a downward pressure on this dimension of autonomy and reflect lower odds of *'partial'* to *'no'* autonomy compared with women from relatively smaller sized households. These results are statistically significant within the overall and rural samples but not in the urban regions. This evidence is further supported by results for '*above average*' sized households where the odds for *'partial'* to *'no'* responses are lower, both within the overall and urban regions. Corresponding to the household size (exclusive of children), results show that the *'above average'* sized household decreases responses from *'partial'* to *'no'* and *'strong'* to *'partial'* autonomy from all samples. Interestingly women from extended family systems show higher odds of *'partial'* to *'no'* autonomy from the overall as well as the rural regions. Furthermore, results do not support the existence of any influence by a mother-in-law regarding this sub-dimension of women's autonomy.

Table 10.1.1 at the end of this Chapter presents component of the household size regarding the number and gender of children. Overall results show that women with '*no child*' have lower odds of 0.69, 0.68 and 0.70 for *'partial'* to *'no'* autonomy relative to those with '*children'* (both genders) from the overall, urban and rural regions respectively. Similarly, Appendix Table 10.1.2[4] shows that an increasing number of children (of both genders) increases women's autonomy in the household. Results from the overall sample show 1.55 times greater odds of *'partial'* to *'no'* autonomy compared with having '*no child'*. We find corresponding results for the urban and rural regions, showing 1.63 and 1.52 greater odds of *'partial'* to *'no'* autonomy. However, with regards to levels of *'strong'* autonomy, the results are insignificant within all three samples. Similarly, Appendix Table 10.1.3 presents the results of another specification, illustrating the effect on women's autonomy of having '*greater numbers of one gender over the other*', and an '*equal number of boys and girls*'. We observe that '*only boys and no girl'* relative to '*no child'* increases odds by 1.50 times for '*partial'* autonomy from the overall sample. Similar results were observed within the urban and the rural samples with 1.53 and 1.50 times greater odds respectively for *'partial'* autonomy. Perhaps not surprisingly,

[4] All tables from Appendix Table 10.1.2 to Appendix Table 10.1.5 are presented in Appendix-V: Determinants of Women's autonomy in Family Planning Decision-making: Disaggregated Analysis.

similar trends are observed within the category of '*girls only and no boys'* from all three samples. An '*equal number of boys and girls*' is also observed to have increasing likelihood of *'partial'* over *'no'* autonomy in the overall and urban regions. We also observe that '*greater numbers of one gender over the other*' show increased odds for *'partial'* over *'no'* autonomy from the overall and urban regions.

We look at another specification regarding children in Appendix Table 10.1.4. This specification investigates the gender of children and the impact on autonomy of having an increasing number of either boys or girls relative to having an '*equal number of boys and girls*'. As postulated, results show that a child's gender has an insignificant effect on any level of autonomy from the overall as well as regional samples, along with having greater numbers of '*only boys'* or *'only girls'* relative to having an *'equal number of boys and girls'*. Further combinations of children, relative to the category *greater numbers of one gender over the other*' are illustrated in Appendix Table 10.1.5. Again, we find no significant effect on women's autonomy except having '*no child*' which has an inverse association with levels of autonomy within all samples. Essentially, we find that increasing the number of children in a household, regardless of their gender enhances levels of *'partial'* autonomy of women relative to *'no child'* from the overall as well as the regional samples.

Analysis of a woman's individual characteristics shows that the age bracket of *'25-29 years'* compared with *'15-19 years'* increases women's autonomy to *'partial'* levels from an overall as well as the rural samples (Table 10.1). However, results for the urban sample do not reflect any positive association of increasing age in connection with any level of autonomy. We observe that women in the age bracket of *'30-34 years'* show a decrease in *'strong'* to *'partial'* autonomy compared with women from the younger age brackets within the overall sample. Similar results were observed within the urban and rural regions. Results generally show that with increasing age comes increased levels of autonomy within this specific dimension of family planning in the household. Regarding a woman's level of education, we find that the minimum level (*'5-years'* schooling) does not increase levels of autonomy relative to having '*no education'* within the overall and urban samples, however, within the rural regions it does decrease levels from *'strong'* to *'partial'* autonomy. However, each level above the minimum level of education plays a significant role in enhancing family planning autonomy in the overall as well as urban and rural samples. For instance *'8-years'* of schooling increases odds by 1.58 and 1.99 times for *'partial'* to *'no'* autonomy compared with '*no education*' respondents within the overall and urban samples but turning out statistically insignificant, however, in the rural regions. Similarly the next higher bracket of *'10-12 years'* of education is shown to significantly increase women's autonomy in the overall sample as well as within the urban and rural regions. Women with this level of education depict greater *'partial'* to *'no'* autonomy compared with

women with *'no education'* in the overall, urban and rural regions. However, this does not appear to significantly increase levels of autonomy from *'strong'* to *'partial'* in any of the three samples. In general, we observe that with each level of education comes an increase in women's autonomy across all levels of autonomy.

Looking now at male spouses' level of education, we find that having *'5-years'* and *'8-years'* of education substantively increases a woman's autonomy within the overall and rural regions, although within the urban regions it has little effect. Furthermore, *'10-12 years'* and *'higher levels of education'* significantly enhance the *'partial'* from *'no'* autonomy levels compared with *'no education'* within the overall and rural regions. Interestingly, the *'10-12 years'* and higher categories appear to decrease the levels of *'partial'* autonomy from *'strong'* autonomy in the overall and rural regions. Analysis of a husband's income level found those belonging to the *'middle'* income group increases levels of *'partial'* over *'no'* and *'strong'* over *'partial'* autonomy as compared with the *'low'* income group from the rural regions. However, these results were not evident within the overall and urban samples. Conversely, those from the *'high'* level income group tended to diminish responses of *'strong'* levels of autonomy to *'partial'* autonomy for all three samples.

In addition to the individual characteristics, we expect that the household socio-economic status is also associated with this dimension of family planning autonomy. Therefore, we attempt to investigate if there is any evidence of a significant relationship between the family income and the autonomy of a woman at the household level. Results depict that families with *'middle'* income status (relative to the *'low'* income status family) does not appear significant in terms of increasing autonomy within the overall as well as regional samples. However, families with *'high'* income status (relative to the *'low'* income status family) were observed to increase the levels of *'partial'* autonomy over *'no'* autonomy in all three samples. Furthermore, *'high'* income status appeared to decrease levels of *'partial'* autonomy from *'strong'* autonomy in the overall and rural regions.

We conducted a geographical inquiry to help understand the variations between rural and urban regions. Results for the province of Sindh appear unrelated with this dimension of autonomy when compared with the reference category of the Punjab province. Women from the province of NWFP, however, were more likely to respond with *'partial'* autonomy compared with the women of Punjab, yet they recorded lower levels of *'strong'* versus *'partial'* autonomy, both within the urban and rural regions. With regards to the province of Baluchistan, we find women's autonomy levels decreased from *'partial'* to *'no'* autonomy when compared with the women from Punjab, both within the urban and rural regions. Unlike the results for *'partial'* autonomy, far greater levels of *'strong'* autonomy were recorded in Baluchistan compared with those recorded in Punjab.

10.3. Birth Control-Related (The Use of Contraceptive Measures) Decision-making Autonomy

This sub-dimension of family planning decision-making autonomy investigates if a woman makes independent decisions regarding birth control measures in the household. Broadly speaking, data from the urban sample shows that almost 25 per cent, 71 per cent and 4 per cent of women appear respectively with *'no'* autonomy, *'partial'* autonomy and *'strong'* autonomy. However, the comparative rural sample depicts statistics of 35 per cent, 62 per cent and 4 per cent respectively. The results clearly indicate a significant variation in the decision-making power of women within and across the regions. We attempt to explain the role of women's threat options along with other common determinants of this sub-dimension of family planning.

Table 10.2 presents results of the above sub-dimension of family planning analysed using the conventional ordered logit and multinomial logit approaches within the overall sample and the urban rural regions.[5] We assess the multinomial logit settings against the dimensions of ''*partial'* to *'no'* autonomy' and ''*strong'* to *'partial'* autonomy' to investigate the varying effects of each of the determinants.

Table 10.2 shows that women who are '*employed*' have 1.46 and 1.53 times greater odds of having birth control autonomy compared with women who are '*unemployed*', within both regions. These results relate to the likelihood of having *'partial'* over *'no'* autonomy, however, levels of *'strong'* autonomy do not appear significantly related. On the other side, above results do not support employed status to be significant in determining women's autonomy from the urban region. In terms of the household size (exclusive of children), we find that increases in size lead to a decrease in a woman's autonomy across both the urban and rural regions. In particular, the '*above average'* sized household appears to significantly decrease levels from *'partial'* to *'no'* and from *'strong'* to *'partial'* autonomy compared with '*below average'* sized households within the overall and regional samples. Additionally, results from the rural regions show that women from an extended family system record relatively lower autonomy levels compared with women from a nuclear family system.

Regarding different formulations of children, overall results from Table 10.2.1 show that women with '*no child'* has lower odds of 0.62, 0.59 and 0.62 times for *'partial'* to *'no'* autonomy compared with having '*children*' from the overall, urban and rural regions respectively. However, results also show that with an increasing number of children (including

[5] Results of the ordered logit model are not consistent with results of the multinomial logit which indicates violation of the parallel line assumption. Therefore we rely on the multinomial logit specifications for analysis: approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 561.56 Prob > chi2 = 0.00. See chapter 5 for further discussion on parallel line assumption and its remedy.

boys and girls) the odds increase 1.20, 1.31 and 1.16 times for *'partial'* to *'no'* autonomy from the overall, urban and rural regions respectively. Alternatively Appendix Table 10.2.2[6] reflects an increasing number of children relative to *'no child'* increases odds by 1.96, 2.21 and 1.86 times for *'partial'* to *'no'* autonomy from the overall, urban and rural regions respectively. Similarly, Appendix Table 10.2.3 presents results of another specification of children, including different combinations relative to the category of *'no child'*. We observe that '*only boys and no girl'* relative to *'no child'* increases odds by 1.71 times for *'partial'* autonomy from the overall sample. Identical results were observed with 1.86 and 1.65 times greater odds for *'partial'* autonomy from the urban and rural regions respectively. Interestingly, similar trends have been observed corresponding to '*girls only and no boys'* within the overall and regional samples. The '*equal number of boys and girls'* category also increases the likelihood of *'partial'* autonomy within the overall and urban samples. We find that '*greater numbers of one gender over the other*' increases the likelihood of *'partial'* autonomy from both the overall and urban samples. However, no significant effect was observed for either of these specifications influencing the *'strong'* over *'partial'* autonomy from the overall and regional samples.

Further specifications of children are analysed with results presented in Appendix Table 10.2.4. The reference category of '*equal number of boys and girls*' is used to evaluate these variations. Interestingly, results show none of the various specifications can be linked to an increase in women's autonomy when compared with '*equal number of boys and girls*'. Furthermore, Appendix Table 10.2.5 demonstrates the effect of a child's gender on women's autonomy compared with the category '*girls greater than boys*'. Corresponding results show that none of the combinations of children compared with the reference category appear statistically related to women's autonomy. This implies that the gender of children plays an insignificant role in enhancing women's autonomy, however, the number of children or increasing number of both boys and girls increases women's autonomy, within both the urban and rural regions.

Analysis of an individual's age and education level is shown in Table 10.2. It shows that the age bracket of *'20-24 years'* compared with the age category of *'15-19 years'* increases women's autonomy to *'partial'* from the rural regions. Similarly, we observe that women in the age bracket of *'25-29 years'* reflect increasing levels of *'partial'* autonomy compared with women from relatively younger age bracket from the overall and rural samples. However, other specified age brackets do not appear relevant to increasing women's autonomy in this aspect of decision-making. Regarding a woman's level of education, we find that all levels *('5-years'* through to the *'higher levels of education')* increase women's autonomy compared with '*no*

[6] All tables from Appendix Table 10.2.2 to Appendix Table 10.2.5 are presented in Appendix-V: Determinants of Women's autonomy in Family Planning Decision-making: Disaggregated Analysis.

education' within the overall and regional samples. Correspondingly, all levels of a husband's education from *'5-years'* through to the *'higher levels of education'* lead to an increase in women's autonomy, relative to the category of '*no education*', within the overall and rural regions. Interestingly, we find that the last two categories of education, however, tend to decrease *'strong'* autonomy to *'partial'* autonomy from the overall and rural regions. These results, however, appear inconsistent with the results from the urban regions. We find relatively affluent husbands appear to be linked to an increase in women's autonomy within the rural regions, yet this is not evident within the urban regions.

During analysis of geographic locations, we find that women from the province of Sindh appear no different in this dimension of autonomy compared with the reference category of the Punjab province, both from within the overall and urban regions. However, rural evidence shows that women from the Sindh depict relatively higher levels of *'partial'* autonomy. Women from the province of NWFP depict relatively greater levels of *'partial'* autonomy relative to Punjab but lower levels of *'strong'* to *'partial'* autonomy, within both regions. Women from Baluchistan have declining levels of autonomy from *'partial'* to *'no'* responses compared with women from Punjab, within both regions.

10.4. Concluding Remarks

In conclusion, the disaggregated results for the threat options and other common determinants appear consistent with the aggregated results for the two sub-dimensions of family planning autonomy ('*having more children*' and '*using contraceptive measures*'). In the following we present results identical across two alternative sub-dimensions of women's autonomy in family related decision-making autonomy.

Results show that having an employed status increases the likelihood of *'partial'* to *'no'* autonomy in both sub-dimensions of family planning decision-making autonomy within the rural regions, however, it lacks relevancy within the urban regions. Similarly, an '*above average'* household size (exclusive of children) implies an inverse relationship with all of the discussed dimensions of autonomy, within both the urban and rural regions. Additionally, we found that women in the rural regions from an extended family formation will hold relatively lower levels of autonomy compared with women from a nuclear family formation. With respect to the gender and number of children in a household, we observed that increasing numbers of children enhance women's *'partial'* autonomy levels across both regions, although it lacks relevancy to any of the aspects of family planning-related decision-making autonomy. Regarding education, results show that any level of education compared to '*no education'* increases women's household autonomy in all three samples. Similarly, a husband's level of education also appears to increase his female partner's level of autonomy within both dimensions of family planning-

related decisions. Likewise, women from more affluent families recorded relatively higher levels of *'partial'* autonomy compared with women from *'low'* income families.

Table 10.1: Determinants of Women's Autonomy in Family Planning (More Children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.26	0.03	1.37	0.01	0.79	0.32	1.23	0.19	1.29	0.12	0.96	0.92	1.27	0.10	1.41	0.03	0.70	0.21
Household Size	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.85	0.06	0.83	0.04	1.01	0.96	0.91	0.53	0.83	0.24	1.31	0.38	0.82	0.05	0.83	0.09	0.83	0.45
	Above Average	0.88	0.06	0.86	0.04	1.02	0.91	0.85	0.14	0.79	0.06	1.16	0.58	0.88	0.12	0.89	0.17	0.91	0.61
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.24	0.01	1.30	0.00	0.88	0.49	1.19	0.15	1.24	0.14	1.08	0.83	1.24	0.03	1.32	0.01	0.79	0.24
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.85	0.66	0.81	0.53	1.28	0.71	2.35	0.60	0.89	0.89	4.86	0.16	0.72	0.36	0.77	0.48	0.67	0.50
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.32	0.12	1.37	0.13	0.92	0.73	0.99	0.96	1.07	0.79	0.62	0.32	1.42	0.13	1.45	0.13	1.01	0.97
	25-29 years	1.50	0.00	1.61	0.00	0.82	0.39	1.33	0.23	1.43	0.15	0.77	0.51	1.52	0.00	1.65	0.00	0.78	0.41
	30-34 years	1.42	0.01	1.59	0.16	0.62	0.08	1.48	0.10	1.85	0.14	0.41	0.08	1.33	0.06	1.46	0.15	0.69	0.28
	35-39 years	1.41	0.01	1.48	0.17	0.83	0.48	1.38	0.23	1.41	0.21	0.89	0.80	1.34	0.04	1.46	0.19	0.73	0.33
	40-44 years	1.46	0.01	1.56	0.20	0.82	0.41	1.24	0.43	1.28	0.36	0.86	0.75	1.50	0.01	1.65	0.21	0.74	0.30
	45-49 years	1.48	0.01	1.60	0.18	0.78	0.41	1.36	0.26	1.50	0.14	0.64	0.43	1.44	0.04	1.57	0.17	0.76	0.45

continue…

Table 10.1(…continued): Determinants of Women's Autonomy in Family Planning (Having More Children) Decision-Making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.03	0.77	1.09	0.37	0.72	0.13	1.07	0.62	1.05	0.74	1.08	0.80	0.99	0.91	1.10	0.46	0.51	0.02
	8-years education	1.41	0.00	1.58	0.00	0.79	0.48	1.81	0.00	1.99	0.00	1.03	0.94	1.01	0.97	1.12	0.50	0.41	0.09
	10-12years education	1.39	0.00	1.65	0.00	0.56	0.10	1.45	0.01	1.67	0.00	0.61	0.31	1.25	0.15	1.44	0.07	0.51	0.17
	Higher education	1.73	0.00	2.10	0.00	0.98	0.96	1.68	0.00	1.89	0.00	0.91	0.86	1.80	0.01	2.31	0.02	1.42	0.69
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.25	0.01	1.22	0.01	1.19	0.29	1.11	0.46	1.09	0.53	1.11	0.72	1.27	0.02	1.23	0.03	1.21	0.36
	8-years education	1.22	0.03	1.29	0.01	0.80	0.25	0.95	0.73	0.95	0.74	0.94	0.86	1.33	0.01	1.45	0.00	0.72	0.19
	10-12years education	1.33	0.00	1.48	0.00	0.65	0.02	1.13	0.38	1.21	0.24	0.79	0.46	1.38	0.00	1.59	0.00	0.54	0.01
	Higher education	1.25	0.02	1.43	0.00	0.59	0.05	1.14	0.40	1.26	0.18	0.78	0.53	1.19	0.15	1.40	0.02	0.44	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.13	0.03	1.14	0.14	1.10	0.50	0.92	0.35	0.98	0.81	0.76	0.20	1.24	0.00	1.19	0.03	1.43	0.05
	High income	0.94	0.64	1.03	0.87	0.31	0.04	0.87	0.45	1.05	0.84	0.30	0.05	0.77	0.25	0.80	0.43	0.47	0.00
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.06	0.43	1.08	0.32	0.90	0.55	1.31	0.09	1.26	0.04	1.16	0.64	0.99	0.93	1.03	0.74	0.81	0.29
	High income	1.19	0.02	1.31	0.00	0.69	0.02	1.44	0.01	1.52	0.01	0.91	0.76	1.10	0.27	1.22	0.05	0.60	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.07	0.46	1.04	0.74	1.23	0.29	0.91	0.55	0.89	0.48	1.05	0.87	1.15	0.28	1.09	0.52	1.33	0.24
	NWFP	1.77	0.00	2.28	0.00	0.53	0.00	2.20	0.00	3.74	0.00	0.48	0.04	1.73	0.00	2.17	0.00	0.56	0.02
	Baluchistan	0.08	0.00	0.07	0.00	3.18	0.00	0.15	0.00	0.10	0.00	8.20	0.00	0.07	0.00	0.07	0.00	1.15	0.80

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; LR chi2 (26) = 2532.24; Prob > chi2 = 0.0000; Log likelihood = -9405.07; Pseudo R2 = 0.1189. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 621.83 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; Design df = 1101; F (52, 1050) = 7.35; Prob > F = 0.00.*

Panel-II: this panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(26, 502)=5.05, P > F = 0.00. Pseudo R2 = 0.1189. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 621.83 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Subpop. No. of obs = 5252; Design df = 527; F (52, 476) = 4.86; Prob > F = 0.00.*

Panel-III: this panel refers to the results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(26, 549) = 6.56, P>F=0.00. Pseudo R2 = 0.1189. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 621.83 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (52, 523) = 310.34; Prob > F = 0.00*

Table 10.1.1: Determinants of Women's Autonomy in Family Planning (More Children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.04	1.36	0.02	0.75	0.24	1.21	0.23	1.27	0.15	0.93	0.85	1.25	0.10	1.40	0.04	0.66	0.15
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.88	0.13	0.92	0.32	0.78	0.18	0.84	0.21	0.85	0.27	0.84	0.58	0.90	0.28	0.95	0.62	0.73	0.19
	Above Average	0.81	0.00	0.88	0.09	0.61	0.00	0.73	0.00	0.75	0.02	0.66	0.10	0.84	0.06	0.93	0.46	0.55	0.00
Household Size: Children	Boy/Girl	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No child	0.70	0.00	0.69	0.00	0.86	0.50	0.68	0.01	0.68	0.02	0.71	0.43	0.70	0.00	0.70	0.00	0.95	0.85
	Boys/Girls (both)	1.01	0.87	1.07	0.31	0.78	0.08	1.02	0.87	1.11	0.42	0.73	0.22	1.01	0.92	1.06	0.52	0.82	0.24
Family Formation	Nuclear	1.00		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.25	0.01	1.22	0.03	1.23	0.26	1.27	0.08	1.21	0.23	1.58	0.19	1.23	0.05	1.22	0.09	1.08	0.74
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.87	0.70	0.82	0.55	1.40	0.62	2.29	0.61	0.89	0.90	4.86	0.20	0.74	0.40	0.77	0.49	0.78	0.68
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.14	0.32	1.17	0.25	0.86	0.56	0.84	0.51	0.91	0.71	0.56	0.25	1.22	0.18	1.24	0.16	0.97	0.92
	25-29 years	1.19	0.19	1.26	0.09	0.73	0.21	1.01	0.97	1.07	0.79	0.66	0.38	1.22	0.20	1.32	0.08	0.70	0.23
	30-34 years	1.07	0.63	1.20	0.22	0.52	0.03	1.06	0.84	1.30	0.34	0.34	0.06	1.02	0.91	1.13	0.48	0.57	0.09
	35-39 years	1.06	0.69	1.10	0.51	0.73	0.26	0.98	0.95	0.99	0.97	0.75	0.60	1.02	0.88	1.11	0.52	0.62	0.14
	40-44 years	1.14	0.38	1.17	0.31	0.82	0.47	0.96	0.88	0.95	0.87	0.84	0.75	1.17	0.36	1.25	0.22	0.71	0.29
	45-49 years	1.18	0.29	1.22	0.23	0.84	0.60	1.08	0.80	1.14	0.66	0.66	0.56	1.15	0.45	1.20	0.33	0.82	0.56

continue…

Table 10.1.1(…continued): Determinants of Women's Autonomy in Family Planning (Having More Children) Decision-Making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
				Multinomial Logit						***Multinomial Logit***						***Multinomial Logit***			
		Ordered Logit[1]		Partial to no autonomy[2]		Strong to partial autonomy[2]		Ordered Logit[1]		Partial to no autonomy[2]		Strong to partial autonomy[2]		Ordered Logit[1]		Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.03	0.71	1.09	0.34	0.73	0.14	1.09	0.52	1.07	0.62	1.08	0.79	0.99	0.93	1.10	0.43	0.51	0.02
	8-years education	1.42	0.00	1.60	0.00	0.79	0.46	1.85	0.00	2.05	0.00	1.04	0.92	1.01	0.97	1.12	0.50	0.42	0.09
	10-12years education	1.39	0.00	1.66	0.00	0.56	0.10	1.46	0.01	1.71	0.00	0.60	0.29	1.27	0.12	1.46	0.06	0.54	0.21
	Higher education	1.78	0.00	2.19	0.00	0.97	0.94	1.76	0.00	2.01	0.00	0.90	0.85	1.82	0.01	2.36	0.01	1.40	0.70
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.26	0.01	1.22	0.01	1.21	0.25	1.11	0.48	1.09	0.55	1.11	0.73	1.27	0.02	1.23	0.03	1.23	0.31
	8-years education	1.23	0.02	1.29	0.01	0.83	0.35	0.97	0.83	0.96	0.79	0.98	0.95	1.34	0.00	1.45	0.00	0.75	0.25
	10-12years education	1.34	0.00	1.49	0.00	0.68	0.04	1.16	0.32	1.23	0.21	0.81	0.52	1.39	0.00	1.59	0.00	0.57	0.01
	Higher education	1.27	0.01	1.45	0.00	0.62	0.08	1.18	0.30	1.31	0.13	0.81	0.59	1.20	0.14	1.39	0.02	0.46	0.03
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.08	0.18	1.08	0.23	1.08	0.57	0.85	0.09	0.90	0.32	0.73	0.14	1.19	0.01	1.15	0.09	1.42	0.05
	High income	0.90	0.41	0.98	0.90	0.32	0.05	0.81	0.25	0.97	0.90	0.30	0.05	0.74	0.19	0.76	0.34	0.76	0.00
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.09	0.24	1.12	0.14	0.89	0.50	1.36	0.05	1.33	0.07	1.11	0.75	1.02	0.82	1.06	0.50	0.81	0.30
	High income	1.28	0.00	1.43	0.00	0.68	0.02	1.54	0.00	1.69	0.00	0.83	0.58	1.19	0.05	1.32	0.01	0.61	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.08	0.44	1.04	0.73	1.24	0.25	0.90	0.49	0.87	0.42	1.06	0.85	1.16	0.24	1.10	0.49	1.36	0.19
	NWFP	1.76	0.00	2.23	0.00	0.55	0.00	2.16	0.00	3.64	0.00	0.50	0.05	1.72	0.00	2.13	0.00	0.59	0.03
	Baluchistan	0.08	0.00	0.07	0.00	3.21	0.00	0.15	0.00	0.09	0.00	8.66	0.00	0.07	0.00	0.07	0.00	1.16	0.80

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; LR chi2 (28) = 2566.28; Prob > chi2 = 0.00; Log likelihood = -9388.05; Pseudo R2 = 0.1202. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 638.48 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; Design df = 1101; F (56, 1046) = 7.40; Prob > F = 0.00.*

Panel-II: this panel refers to the results of the urban regions, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(28, 500) = 5.42, P > F = 0.00. Pseudo R2 = 0.1202. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 638.48 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(56, 472) = 5.26; Prob > F = 0.00.*

Panel-III: this panel refers to the results of the rural* regions*, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(28, 547) = 6.42, P>F=0.00. Pseudo R2 = 0.1202. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 638.48 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (56, 519) = 289.19; Prob > F = 0.00*

Table 10.2: Determinants of Women's Autonomy in Family Planning (Use of Contraceptives) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.32	0.01	1.46	0.00	0.85	0.44	1.16	0.35	1.26	0.20	0.88	0.73	1.37	0.02	1.53	0.01	0.82	0.42
Household Size	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.13	0.85	0.11	1.00	0.99	0.93	0.66	0.84	0.32	1.30	0.38	0.84	0.10	0.85	0.18	0.83	0.46
	Above Average	0.98	0.77	1.00	0.97	0.90	0.46	0.94	0.63	0.90	0.44	1.11	0.66	0.98	0.78	1.03	0.76	0.79	0.19
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.24	0.01	1.33	0.00	0.85	0.35	1.10	0.49	1.21	0.23	0.83	0.54	1.29	0.01	1.36	0.00	0.83	0.39
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.09	0.81	1.07	0.84	1.20	0.77	4.65	0.29	1.94	0.58	3.69	0.25	0.83	0.55	0.91	0.79	0.70	0.52
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.48	0.15	1.46	0.21	1.20	0.48	1.15	0.59	1.11	0.67	0.94	0.99	1.60	0.00	1.60	0.00	1.22	0.51
	25-29 years	1.78	0.00	1.78	0.00	1.21	0.44	1.71	0.03	1.72	0.14	1.05	0.91	1.79	0.00	1.82	0.00	1.21	0.55
	30-34 years	1.58	0.00	1.67	0.16	0.91	0.73	1.81	0.01	2.09	0.16	0.67	0.40	1.48	0.01	1.55	0.19	0.98	0.95
	35-39 years	1.82	0.00	1.92	0.18	1.00	1.00	2.04	0.01	2.09	0.19	1.08	0.87	1.70	0.00	1.86	0.20	0.88	0.69
	40-44 years	1.63	0.00	1.71	0.19	0.98	0.95	1.56	0.11	1.61	0.16	0.90	0.82	1.64	0.00	1.75	0.13	0.97	0.93
	45-49 years	1.55	0.00	1.61	0.21	0.96	0.90	1.53	0.14	1.52	0.14	0.95	0.93	1.53	0.01	1.66	0.16	0.84	0.64

continue…

Table 10.2 (…continued): Determinants of Women's Autonomy in Family Planning (Use of Contraceptives) Decision-Making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.08	0.37	1.18	0.10	0.72	0.11	1.06	0.69	1.05	0.75	1.04	0.88	1.08	0.48	1.25	0.10	0.51	0.01
	8-years education	1.32	0.01	1.50	0.00	0.73	0.31	1.32	0.10	1.46	0.05	0.87	0.72	1.18	0.27	1.37	0.10	0.50	0.15
	10-12years education	1.37	0.01	1.64	0.00	0.65	0.09	1.21	0.23	1.39	0.08	0.66	0.22	1.53	0.01	1.92	0.01	0.69	0.37
	Higher education	1.60	0.00	2.16	0.00	0.76	0.53	1.39	0.07	1.72	0.01	0.69	0.48	1.90	0.01	2.83	0.01	1.15	0.87
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.17	0.05	1.16	0.07	1.06	0.71	1.04	0.78	1.09	0.58	0.90	0.72	1.17	0.10	1.15	0.15	1.12	0.55
	8-years education	1.10	0.27	1.19	0.09	0.74	0.11	0.93	0.66	0.96	0.81	0.85	0.61	1.15	0.18	1.28	0.05	0.65	0.07
	10-12years education	1.18	0.05	1.32	0.01	0.70	0.04	1.09	0.55	1.19	0.32	0.76	0.33	1.17	0.12	1.33	0.02	0.64	0.03
	Higher education	1.18	0.11	1.44	0.00	0.54	0.02	1.16	0.38	1.43	0.06	0.61	0.19	1.06	0.65	1.29	0.10	0.45	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.18	0.00	1.18	0.01	1.15	0.30	0.99	0.90	1.04	0.73	0.85	0.44	1.29	0.00	1.24	0.01	1.43	0.04
	High income	1.28	0.08	1.46	0.19	0.95	0.90	1.32	0.12	1.90	0.03	0.82	0.69	0.91	0.74	0.88	0.72	0.78	0.75
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.04	0.69	1.04	0.69	0.97	0.88	1.21	0.27	1.06	0.71	1.61	0.12	0.99	0.93	1.04	0.73	0.80	0.27
	High income	1.13	0.10	1.23	0.01	0.74	0.06	1.32	0.04	1.32	0.07	1.20	0.54	1.06	0.48	1.19	0.09	0.60	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.17	0.15	1.10	0.44	1.34	0.11	0.85	0.31	0.78	0.17	1.22	0.46	1.39	0.03	1.31	0.09	1.38	0.19
	NWFP	1.56	0.00	2.06	0.00	0.48	0.00	1.74	0.00	3.15	0.00	0.39	0.01	1.59	0.00	2.04	0.00	0.51	0.01
	Baluchistan	0.09	0.00	0.08	0.00	2.63	0.00	0.13	0.00	0.08	0.00	6.80	0.00	0.07	0.00	0.08	0.00	1.08	0.86

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (26) = 2689.48; Prob > chi2 = 0.0000; Log likelihood = -9083.63; Pseudo R2 = 0.1290. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 561.56 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (52, 1050) = 5.83; Prob > F = 0.00.*

Panel-II: this panel refers to the results of the urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(26, 502)=4.51, P > F = 0.00. Pseudo R2 = 0.1290. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 561.56 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(52, 476) = 3.92; Prob > F = 0.00.*

Panel-III: this panel refers to results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(26, 549) = 5.46, P>F=0.00. Pseudo R2 = 0.1290. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (26) = 561.56 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (52, 523) = 4.25; Prob > F = 0.00*

Table 10.2.1: Determinants of Women's Autonomy in Family Planning (Use of Contraceptives) Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.30	0.02	1.44	0.01	0.82	0.34	1.13	0.46	1.23	0.26	0.84	0.65	1.35	0.04	1.51	0.01	0.79	0.33
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.08	0.88	0.14	0.85	0.37	0.79	0.09	0.78	0.10	0.82	0.49	0.88	0.21	0.91	0.35	0.85	0.48
	Above Average	0.87	0.06	0.97	0.67	0.60	0.00	0.78	0.04	0.85	0.23	0.60	0.05	0.88	0.19	0.95	0.96	0.57	0.01
Household Size: Children	Boy/Girl	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No child	0.64	0.00	0.62	0.00	0.97	0.89	0.62	0.01	0.59	0.00	0.92	0.85	0.64	0.00	0.62	0.00	0.99	0.97
	Boys/Girls (both)	1.11	0.13	1.20	0.01	0.80	0.08	1.18	0.13	1.31	0.04	0.83	0.44	1.08	0.37	1.16	0.10	0.79	0.11
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.21	0.02	1.19	0.05	1.14	0.47	1.10	0.48	1.08	0.64	1.24	0.48	1.25	0.03	1.24	0.05	1.06	0.80
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.11	0.78	1.07	0.84	1.31	0.67	4.64	0.28	1.99	0.56	3.75	0.28	0.84	0.59	0.90	0.77	0.80	0.69
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.22	0.10	1.17	0.21	1.18	0.53	0.94	0.81	0.89	0.65	0.93	0.90	1.31	0.05	1.29	0.08	1.22	0.51
	25-29 years	1.30	0.03	1.26	0.08	1.15	0.57	1.20	0.49	1.15	0.61	0.94	0.88	1.32	0.05	1.31	0.07	1.18	0.59
	30-34 years	1.08	0.56	1.11	0.46	0.83	0.51	1.16	0.58	1.28	0.39	0.57	0.28	1.03	0.86	1.05	0.76	0.91	0.79
	35-39 years	1.24	0.12	1.26	0.12	0.94	0.81	1.30	0.39	1.27	0.47	0.94	0.91	1.19	0.27	1.26	0.17	0.83	0.57
	40-44 years	1.13	0.41	1.11	0.52	1.03	0.90	1.04	0.89	0.99	0.99	0.89	0.84	1.16	0.40	1.17	0.42	1.02	0.95
	45-49 years	1.09	0.59	1.04	0.81	1.10	0.78	1.04	0.90	0.94	0.84	1.02	0.97	1.09	0.64	1.10	0.63	0.97	0.94

continue…

Table 10.2.1 (…continued): Determinants of Women's Autonomy in Family Planning (Use of Contraceptives) Decision-Making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.09	0.34	1.18	0.10	0.72	0.11	1.09	0.58	1.07	0.63	1.05	0.85	1.08	0.48	1.25	0.10	0.51	0.01
	8-years education	1.32	0.01	1.52	0.00	0.73	0.30	1.36	0.07	1.52	0.03	0.86	0.68	1.17	0.28	1.37	0.10	0.51	0.15
	10-12years education	1.37	0.01	1.65	0.00	0.65	0.09	1.22	0.21	1.43	0.06	0.65	0.21	1.55	0.01	1.93	0.01	0.72	0.43
	Higher education	1.66	0.00	2.29	0.00	0.75	0.51	1.49	0.03	1.89	0.00	0.69	0.48	1.93	0.00	2.93	0.00	1.12	0.89
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.17	0.05	1.16	0.07	1.08	0.63	1.03	0.84	1.07	0.65	0.90	0.72	1.17	0.09	1.15	0.15	1.14	0.49
	8-years education	1.12	0.21	1.19	0.08	0.76	0.16	0.96	0.79	0.98	0.89	0.89	0.72	1.16	0.16	1.28	0.05	0.66	0.08
	10-12years education	1.20	0.04	1.32	0.01	0.73	0.06	1.12	0.44	1.22	0.26	0.79	0.42	1.18	0.10	1.32	0.02	0.67	0.05
	Higher education	1.20	0.07	1.46	0.00	0.56	0.03	1.21	0.26	1.49	0.04	0.64	0.23	1.07	0.61	1.29	0.10	0.47	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.05	1.11	0.11	1.13	0.36	0.90	0.27	0.94	0.53	0.81	0.31	1.24	0.00	1.19	0.04	1.40	0.05
	High income	1.21	0.18	1.36	0.16	0.97	0.94	1.21	0.29	1.70	0.07	0.81	0.67	0.88	0.63	0.84	0.61	0.83	0.81
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.06	0.52	1.06	0.49	0.98	0.90	1.24	0.19	1.11	0.51	1.56	0.14	1.01	0.92	1.06	0.59	0.82	0.31
	High income	1.20	0.01	1.33	0.00	0.74	0.06	1.41	0.01	1.47	0.01	1.11	0.72	1.14	0.13	1.29	0.02	0.62	0.02
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.18	0.12	1.11	0.38	1.35	0.10	0.85	0.30	0.77	0.16	1.23	0.45	1.43	0.02	1.35	0.07	1.39	0.18
	NWFP	1.56	0.00	2.03	0.00	0.50	0.00	1.72	0.00	3.06	0.00	0.41	0.01	1.59	0.00	2.02	0.00	0.52	0.01
	Baluchistan	0.08	0.00	0.08	0.00	2.64	0.00	0.13	0.00	0.08	0.00	7.24	0.00	0.07	0.00	0.07	0.00	1.07	0.87

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (28) = 2742.96; Prob > chi2 = 0.00; Log likelihood = -9056.88; Pseudo R2 = 0.1315. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 582.75 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (56, 1046) = 6.56; Prob > F = 0.00.*

Panel-II: this panel refers to the results of the urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(28, 500) = 5.09, P > F = 0.00. Pseudo R2 = 0.1315. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 582.75 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(56, 472) = 4.49; Prob > F = 0.00.*

Panel-III: this panel refers to results of the rural regions, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(28, 547) = 5.73, P>F=0.00. Pseudo R2 = 0.1315. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (28) = 582.75 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (56, 519) = 4.76; Prob > F = 0.00*

CHAPTER 11

CONCLUSIONS, DISTINCTIONS, LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

11.1. Introduction

This thesis carries out thorough research on the multidimensional concept of women's autonomy by introducing a wide framework of inquiry. The thesis provides an in-depth discussion on the construction of variables and data information, empirical strategy and corresponding empirical results from the overall sample, as well as from within the urban and rural regions of Pakistan. This Chapter aims to summarize the discussion and analysis of this research with concluding remarks. It highlights the contribution of this study to the existing literature, and presents further avenues for extending this research.

11.2. Summary and Concluding Remarks

Chapter 1 details the main objective of this thesis as an investigation into the appropriate determinants of women's autonomy in the household. Chapter 2 provides a review of the wide range of theoretical and empirical studies on the subject, and identifies potential gaps in the existing literature. It is observed that the current literature lacks consensus on what constitutes the common determinants of women's autonomy in the household. This thesis fills this gap by identifying the proper channels based on household composition in determining women's autonomy in the household. Correspondingly in Chapter 3, we attempt to fill the gap by formulating an all-encompassing framework of analysis based on the standard methods of *Family Economics*. More specifically, the framework of analysis identifies the appropriate threat options of women that support an increase in their levels of bargaining power. The threat options include women with an earned income and different formulations of household size within a variety of household decision-making processes. Additionally, we applied the empirical model to determinants identified within other disciplines, for example, within the fields of sociology, anthropology and demography.

In this thesis, we utilise the 'Pakistan Social and Living Standards Measurement Survey' (PSLM) which provides us with detailed micro-level data from 15,453 households in Pakistan. This data allows us to investigate the multilevel dimensions of women's autonomy not

previously explored in the existing literature. Further details on variable constructions and data information are included in Chapter 4 following the descriptive evidence presented in Chapter 5. In Chapter 6 we discuss possible methods of estimation in detail by arguing why multinomial logistic models are a more appropriate model, subject to the violation of the parallel line assumption of ordered logit models. Furthermore we also explain the implications of using the multinomial logit models of estimation compared with conventional logit models which are frequently used in analysing the multilevels of women's autonomy. In the later Chapters (Chapter 7 to Chapter 10) we present the empirical results of both aggregated and disaggregated economic and family aspects of women's autonomy in the household. We replicate the above results for the overall sample as well as for the urban and rural regions of Pakistan. The concluding remarks for each are presented in the following Section.

Chapter 7 presents results of the threat options (earned income and household size), individual characteristics, family socio-economic status and state/province fixed effects to explain the multilayered concept of aggregated economic decision-making power in the household within the overall, urban and rural region samples. In general, results appear consistent with the proposed theoretical framework of study in Chapter 3. Furthermore, the multinomial logit settings also prove to be the most appropriate specification for empirical analysis.

Results show that an employed status (earned income) as a threat option compared with an unemployed status increases a woman's bargaining power in household economic decision-making, within both the urban and rural regions. More specifically, results show earned income increases the likelihood of *'partial'* to *'strong'* autonomy of women from the urban regions, however from *'no'* to *'partial'* autonomy of women from the rural regions. It is important to note that the existing literature considers whether the earned income status of women increases their autonomy without making the distinction of the multilevel aspect of autonomy. Regarding the other threat option, we observe that household size above the *'average'* size substantially decreases women's autonomy in the urban as well as rural regions. Furthermore, we find that household size in terms of elderly persons and the relatives of a husband apparently depreciate women's autonomy in the household. In addition to this we find that an increasing number of children increases women's *'partial'* autonomy but is not relevant to the *'strong'* autonomy in the overall as well as urban regions. We also note that proportionally increasing the number of children (*'equal number of boys and girls'*) increases women's autonomy in the household. Interestingly, the number of children or the gender does not appear relevant in influencing women's autonomy for those in the rural regions. Obviously the above conclusion may be traced back to the prevailing male dominant culture commonly found in rural society.

We find that women's education plays an important role in enhancing their autonomy in the household. Results confirm that relatively educated women from the urban or the rural

regions enjoy greater levels of autonomy compared with women with no education or relatively lower levels of education. More interestingly, education has a greater impact in the rural regions on enhancing women's autonomy, particularly noticeable given the low level of autonomy within these areas. We also observe that with increasing age women are likely to gain more autonomy in the household, within both urban and rural regions. Regarding a husband's level of education, we fail to observe any effects on a wife's level of autonomy in the household from any of the regions. However, his income does appear positively linked to his wife's autonomy. Along similar lines we find '*high'* levels of joint family income (family socio-economic status) are significantly related to increased levels of autonomy compared with the '*low'* income group, both within the urban and rural regions. Furthermore, we find that women from the provinces of Sindh, NWFP and Baluchistan hold relatively less autonomy compared with women from the province of Punjab.

Regarding the disaggregated analysis of economic decision-making autonomy in Chapter 8, overall results appear consistent with the evidence we observed within the aggregated economic autonomy. We observe that determinants of the threat options (earned income and the size of the household) influence women's autonomy in food, clothing and footwear, travel and recreation and medical-related decision-making aspects within all three sample groups. More specifically, we note that women with an employed status reflect relatively higher degrees of *'partial'* and/or *'strong'* autonomy in purchasing decisions concerning food, clothing and footwear, within the overall and rural samples. However, the above results do not appear relevant to those within the urban regions where similar results lacked statistical significance. Interestingly, we find the employed status of women led to increased levels of *'partial'* autonomy in travel and recreation and medical treatment-related decision-making for women from the urban regions but not for those from the rural region. Therefore, we clearly find that the regions play a discriminatory role in the current levels of women's household-related decision-making autonomy.

The household size, which excludes the calculation of children, appears negatively related to women's autonomy in all aspects across both regions. We also observe that the extended family formation appears to diminish women's autonomy within both urban and rural settings. An increasing number of children, however, correlate with an increasing level of women's autonomy, although only within the urban regions. We also find that the gender of children is not related to increasing women's autonomy, contrary to several studies which find the presence of boys in a household does increase women's autonomy. However, this study shows that both boys and girls appear equally important for increasing women's autonomy in the household. As observed within the aggregated economic decision-making results, all other determinants appear with similar levels of association with all four dimensions of autonomy.

Regarding the sphere of family planning decisions, results show that an employed status increases levels to *'partial'* autonomy except within the urban regions. A household size (excluding children) above the '*average'* size decreases the levels of *'strong'* towards *'partial'* autonomy within both urban and rural regions. Analysis of children shows that an increasing number of boys and girls may increase women's autonomy. However the gender of children does not appear relevant to women's autonomy in the household. Overall, results for the different threat options within the sphere of family planning autonomy appear consistent with results observed in the sphere of economic decision-making autonomy in Chapter 7.

Within the area of family planning decisions, we observe that women's education plays a positive role in enhancing women's autonomy. More specifically, results show that relatively educated women display greater levels of autonomy compared with women with '*no*' or low levels of education. Results also indicate that women aged between 15-19 years and 40-49 years record higher levels of autonomy within each successive age bracket, though only within the rural regions. Interestingly, results show that educated husbands appear to significantly increase women's autonomy in family planning decision-making aspects. We find that '*8-years*' and all higher levels of education increase the likelihood a woman has *'partial'* autonomy over '*no'* autonomy. Further results show that the husband's income level ('*middle'* income) increases the likelihood of a woman having *'partial'* autonomy, although it decreases the likelihood for *'strong'* to *'partial'* autonomy within the rural regions. Furthermore, the family socio-economic status appears to significantly increase women's autonomy in family planning-related decisions. Additionally, we find women from the province of Sindh and NWFP have greater *'partial'* autonomy but lower levels of '*strong'* autonomy compared with women from the province of Punjab. Women from the province of Baluchistan record lower levels of *'partial'* and *'strong'* autonomy compared with women from the province of Punjab, within all sample groups.

The results of the disaggregated analysis of family planning autonomy are consistent with the aggregated measures. For instance, the employed status increases the likelihood of *'no'* to *'partial'* levels of autonomy in both sub-dimensions of family planning decision-making within the rural regions, but not the urban regions. The average household size (excluding children) is inversely related to both sub-dimensions of autonomy within both regions. In addition, results show that women from the extended family formation record relatively lower autonomy levels compared with women from nuclear family formations within the rural regions. Regarding the gender and number of children we observed that increasing numbers of children evidently enhance women's *'partial'* autonomy across both regions. Further, results do not support the positive impact of one gender over the other, in terms of influencing women's autonomy in any of the aspects of family planning-related decision-making autonomy. However, a woman's level of education significantly increases her levels of autonomy in the disaggregated analysis of family planning decision-making. Similarly, her husband's level of

education also increases his wife's autonomy in all relevant sub-dimensions of family planning - related decision-making autonomy.

11.3. Distinctions and Implications of the Study

Various important distinctions on the subject of women's autonomy may be attributed to this research study. The one aspect of these can be recognized to the existing stream of literature on similar line of research. The second aspect relates to the country specific experience under observation, here specifically for the case of Pakistan.

This study has attempted to formulate a framework of analysis based on standard methods of microeconomics theory of household decision-making, along with considerations of the cultural aspects relevant in determining women's autonomy. As a result, this study has successfully bridged the approaches of different disciplines into one encompassing analytical model of women's autonomy. The approach adopted in the current study was intended to answer several questions which arose out of the existing literature regarding the determinants of women's autonomy. This study represents a step forward by adding findings to the existing literature; it identifies a valid set of threat options associated with the bargaining power of women relative to men in the household. Correspondingly, the simulation exercise presented in Chapter 3 confirms the validity of those threat utilities playing an important role in the non-cooperative model settings of household decision-making. Further, the empirical exercise presented throughout this study confirms the validity of those threat options with varying degrees across alternative dimensions of women's autonomy relating to both economic and family planning aspects of household decision-making.

Obviously this study has an advantage over several previous studies as it analyses a relatively large data set based on stratified sampling, representative of the entire population of Pakistan. Further, the current study also enhances its contribution by adopting the most appropriate technique of estimation called the multinomial logit model which explains the varying *'partial'* effects of determinants across different levels of autonomy. Usually, this important variation has been ignored in the past which led to narrow, if not, misleading results. To clarify, this study clearly differentiates between different levels of women's autonomy, from *'no'* autonomy, to *'partial'* autonomy and *'strong'* autonomy. These differences definitely exist as has been substantiated through the empirical evidence where we observed the varying effects of separate determinants on different levels of autonomy. Another important distinction of this thesis is that it provides parallel results for different sample groups; the overall as well as urban and rural regions, thus quieting debate surrounding the aggregated versus disaggregated results of determinants of women's autonomy.

As this is a country specific thesis, we may claim its status as a first ever study of its nature, analysing almost all of the PSLM data of country wide information on socio-economic

indicators relevant to women's decision-making power in the household. It is important to note that women constitute almost 52 per cent of the total population of Pakistan. Given the constrained freedom of women in general, and in the household in particular, data shows almost 70 per cent of women never attended school, only 9 per cent are employed and 87 per cent belong to an extended family formation. Furthermore, 44 per cent of women from the urban regions and 54 per cent from the rural regions have no say in household decision-making activities. This information confirms in other words the inferior position of women in Pakistani society hence linked with the existence of separate sphere model implications.

Further, we may highlight some important implications drawn from this research. Given the lack of women's education, clearly a country wide educational program focusing on women should be extended to enable them to build on their education levels. Results recommend that educational facilities should be extended at as low a cost as possible, given women from relatively poorer families were those least likely to access education. Regarding employment, results recommend policy interventions which increase a woman's independence, leading to less dependence on herr male counterpart. This may be possible by creating reserved seats for women to gain representation in different sectors of the economy. In addition to the above, additional measures such as small credit schemes should be extended towards women interested in starting small scale businesses or small home trades. It is not satisfactory to provide such resources as women need, both the agencies involved and a supportive environment are required to fully capitalise on these measures. This can only be achieved through society becoming more gender balanced in its values. Equally, women must also be encouraged to participate in different activities in order to achieve the level of autonomy in relevant decision-making processes that is their due.

In keeping with these recommendations, results indicate that women with an employed status show relatively higher levels of autonomy compared with unemployed women. By encouraging women to participate in the labour market, their levels of bargaining power in the household should increase. However, this is not so straightforward as women who are able to find independent jobs were observed as unwilling to participate in the labour market. There could be two possibilities for non-participation. Firstly, the head of the household may restrict a woman to household duties and forbid her joining the labour market with a chance to earn an independent income. This is an example of a cultural barrier within a male-dominated society, where men work outside of the home and women remain inside it. Given this example, we can see that rigorous policy planning is required through which society can be educated on the importance of women's participation in the socio-economic development of a household.

Just as significant, we observe household composition is strongly related to women's autonomy in the household. As mentioned, 87 per cent of women are from an extended family system with relatively lower levels of autonomy compared with women from a nuclear family

system. There is possibly a link to an increasing household size thus requiring a greater input of women's time in preparing the household public goods. This is further supported by the observation that where there are elderly persons and a husband's relatives present in the household, we see decreasing levels of women's autonomy. Conversely, we find that increasing the household size in terms of having more children (irrespective of gender) increases women's autonomy in the household. As mentioned in Chapter 7, women's intentions after marriage are to have children to secure her place within the household. This intention may be linked to the possibility that a husband may seek out another marriage to secure the presence of children. Subsequently a wife may also face divorce from her husband, which further depreciates the respect and value of women in society. Therefore, women perceive having children with financial stability and some level of power in the household. These results give us a cautious understanding of this complex matter and further analysis should be addressed in different stages by social scientists and policymakers, through highlighting the important role women must play in developing society.

The above observations reflect deeper implications for the analysis of women's autonomy on the socio-economic fabric of society. The analysis illustrates the need to focus on household composition along with the conventional determinants of women's autonomy. Certainly the list of individual characteristics, including level of education, control of assets, a husband's level of education and income, family socio-economic status, all play an important role in shaping women's autonomy. Household composition is broadly associated with strong cultural norms which usually contradict with modern time requirement of the family evolutions. We believe that a long-term social policy based on a general awareness of women's role in family welfare and particularly the children's well-being should be emphasised through a mega-campaign to society. This may allow Pakistani society to slowly adapt to the realisation that women have an important role to play in developing the country.

11.4. Limitations of the Study

Given the distinctions and contributions of this study to the existing literature on this subject, we also point out a few limitations which are mainly associated with the questionnaire and data used in this thesis. The questions posed in the PSLM survey to the respondents are often ambiguous, lack clarity or carry dual meanings. For instance, the question, '*Who in your household decides whether you should have more children?'* does not differentiate among women who have no children from those with children, or those with a large number of children. Further, the coding system adopted in the questionnaire also appears unclear in terms of making purchasing or consumption-related decisions, and shows repetitions which may become a source of bias in the responses. The PSLM is the largest and widest data set available for Pakistan, yet it appears to be missing a lot of important information necessary for a

comprehensive analysis of women's autonomy in the household. Among various aspects we could not find information relevant to the *DOWRY* or co-residence of married women's relatives like a husband's relatives living in the same household. We were also unable to track down any information on married women's parents or siblings, significant people because of the important role they provide by giving moral or financial support to their daughter, and therefore also as a source of increasing her autonomy levels within the household. These limitations must be kept in mind when interpreting the analysis.

Regardless of the fact that we tried to discuss the potential problem of simultaneity in the empirical analysis, we were left short of the necessary information to fully investigate the issue of endogeniety. There are a few studies that have considered crop yield and the body mass index of women as instruments while investigating women's autonomy from the selected provinces of Bangladesh and India. The current study however demonstrates a broader scope of analysis including urban and rural stratifications, and thus requires effective information regarding a woman's parents. of a woman married to the other household. This may have provided sufficient information viewing as absolutely exogenous to the set of above determinants of women's autonomy in the household. Essentially, we lack necessary information on married women prior to their marriage which may prove relevant to deeper analysis.

11.5. Scope for Further Research

A logical step forward from the current study requires a greater interdisciplinary formulation of an analysis framework for studying women's autonomy. It implies that the current settings of the framework of analysis, based on analytical methods of microeconomics, should be extended by including proper measures of cultural norms and traditions for the comprehensive analysis of women's autonomy. Secondly, it requires more data points or longitudinal analysis to observe any changes occurring within family systems over time. Further work is anticipated by the author along these lines. Therefore a synthetic cohort analysis and comparison of different assimilated characteristics of women in the more recent surveys of PSLM will be undertaken to investigate the changes over time, if any, of women's bargaining power in the household. In addition, the role of women's autonomy within the household, her children's health and educational wellbeing, will also be included in this subsequent project.

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APPENDIX-I: Descriptive Evidence

Appendix Table 6.4.1: Food-related Autonomy and Determinants (χ^2 results)

Determinants		Observations (%)	Levels of Autonomy			Significance (P-value)
			No (%)	Partial (%)	Strong (%)	
Employment Status	Unemployed	13879 (91)	57	17	26	<0.001
	Employed	1440 (9)	33	25	42	
Household Size	Below Average	5503 (36)	41	23	36	<0.001
	Average	1908 (12)	49	20	31	
	Above Average	7908 (52)	66	14	20	
Household Size Excluding Children	Below Average	5823 (38)	41	24	35	<0.001
	Average	2229 (15)	52	20	28	
	Above Average	7267 (47)	67	13	21	
Number of Sons	No son	3796 (25)	61	15	24	<0.001
	1 son	3727 (24)	56	17	27	
	2 & more sons	7796 (51)	52	20	28	
Number of Daughters	No daughter	4226 (28)	62	15	23	<0.001
	1 daughter	4087 (27)	54	17	29	
	2 & more daughters	7006 (46)	51	20	28	
Family Formation	Nuclear	1981 (13)	38	24	39	<0.001
	Extended	13338 (87)	57	17	25	
Mother-in-Law	Present	15168 (99)	55	18	27	<0.001
	Not Present	151 (1)	78	1	21	
Age Structure	15-19 years	781 (5)	75	11	14	<0.001
	20-24 years	2504 (16)	67	14	19	
	25-29 years	3184 (21)	58	16	26	
	30-34 years	2655 (17)	52	20	28	
	35-39 years	2642 (17)	46	21	33	
	40-44 years	2086 (14)	46	21	33	
	45-49 years	1467 (10)	49	21	30	
Woman's Level of Education	No education	10792 (70)	60	17	23	<0.001
	5-years education	1649 (11)	43	21	36	
	8-years education	741 (5)	42	18	40	
	10-12yrs education	1095 (7)	41	21	38	
	Higher education	1007 (7)	42	19	39	
Husband's Level of Education	No education	5113 (33)	56	20	24	<0.001
	5-years education	2234 (15)	54	21	25	
	8-years education	1566 (10)	52	18	30	
	10-12yrs education	2225 (15)	54	18	28	
	Higher education	2237 (15)	53	19	28	
Husband's Income Status	Low income	8595 (56)	58	19	24	<0.001
	Middle income	4526 (30)	51	20	29	
	High income	464 (3)	41	23	35	
Family Income Status	Low income	5660 (37)	59	19	22	<0.001
	Middle income	3026 (20)	56	17	27	
	High income	6633 (43)	51	18	32	

Source: Author's calculations

Appendix Table 6.4.2: Clothing & footwear-related Autonomy and Determinants (χ^2 results)

Determinants		Observations (%)	Levels of Autonomy			Significance (P-value)
			No (%)	Partial (%)	Strong (%)	
Employment Status	Unemployed	13879 (91)	47	24	30	<0.001
	Employed	1440 (9)	25	30	46	
Household Size	Below Average	5503 (36)	33	28	39	<0.001
	Average	1908 (12)	40	26	34	
	Above Average	7908 (52)	54	21	25	
Household Size Excluding Children	Below Average	5823 (38)	34	30	36	<0.001
	Average	2229 (15)	43	24	32	
	Above Average	7267 (47)	54	19	27	
Number of Sons	No son	3796 (25)	51	20	28	<0.001
	1 son	3727 (24)	45	22	33	
	2 & more sons	7796 (51)	41	27	32	
Number of Daughters	No daughter	4226 (28)	51	21	28	<0.001
	1 daughter	4087 (27)	45	23	32	
	2 & more daughters	7006 (46)	41	27	33	
Family Formation	Nuclear	1981 (13)	33	28	39	<0.001
	Extended	13338 (87)	47	24	30	
Mother-in-Law	Present	15168 (99)	44	24	31	<0.001
	Not Present	151 (1)	71	5	24	
Age Structure	15-19 years	781 (5)	65	18	18	<0.001
	20-24 years	2504 (16)	56	20	24	
	25-29 years	3184 (21)	48	22	30	
	30-34 years	2655 (17)	43	26	31	
	35-39 years	2642 (17)	36	28	36	
	40-44 years	2086 (14)	36	26	38	
	45-49 years	1467 (10)	38	25	37	
Woman's Level of Education	No education	10792 (70)	51	25	24	<0.001
	5-years education	1649 (11)	33	25	42	
	8-years education	741 (5)	27	24	49	
	10-12yrs education	1095 (7)	28	23	50	
	Higher education	1007 (7)	24	20	55	
Husband's Level of Education	No education	5113 (33)	49	27	24	<0.001
	5-years education	2234 (15)	45	28	27	
	8-years education	1566 (10)	42	23	35	
	10-12yrs education	2225 (15)	44	23	33	
	Higher education	2237 (15)	37	25	38	
Husband's Income Status	Low income	8595 (56)	49	25	26	<0.001
	Middle income	4526 (30)	39	27	34	
	High income	464 (3)	27	22	51	
Family Income Status	Low income	5660 (37)	50	26	24	<0.001
	Middle income	3026 (20)	47	24	28	
	High income	6633 (43)	39	23	38	

Source: Author's calculations

Appendix Table 6.4.3: Recreation & Traveling-related Autonomy and Determinants (χ^2 results)

Determinants		Observations (%)	Levels of Autonomy			Significance (P-value)
			No (%)	Partial (%)	Strong (%)	
Employment Status	Unemployed	13879 (91)	53	39	8	<0.001
	Employed	1440 (9)	39	47	14	
Household Size	Below Average	5503 (36)	43	45	12	<0.001
	Average	1908 (12)	48	40	11	
	Above Average	7908 (52)	59	36	5	
Household Size Excluding Children	Below Average	5823 (38)	41	48	11	<0.001
	Average	2229 (15)	54	37	9	
	Above Average	7267 (47)	60	34	6	
Number of Sons	No son	3796 (25)	59	33	7	<0.001
	1 son	3727 (24)	55	37	8	
	2 & more sons	7796 (51)	47	44	9	
Number of Daughters	No daughter	4226 (28)	60	33	6	<0.001
	1 daughter	4087 (27)	52	39	9	
	2 & more daughters	7006 (46)	47	43	10	
Family Formation	Nuclear	1981 (13)	43	45	13	<0.001
	Extended	13338 (87)	53	39	8	
Mother-in-Law	Present	15168 (99)	52	40	9	<0.001
	Not Present	151 (1)	74	17	9	
Age Structure	15-19 years	781 (5)	68	29	3	<0.001
	20-24 years	2504 (16)	65	31	4	
	25-29 years	3184 (21)	56	37	8	
	30-34 years	2655 (17)	51	41	8	
	35-39 years	2642 (17)	43	46	11	
	40-44 years	2086 (14)	44	44	12	
	45-49 years	1467 (10)	43	45	12	
Woman's Level of Education	No education	10792 (70)	54	39	6	<0.001
	5-years education	1649 (11)	46	42	13	
	8-years education	741 (5)	48	38	15	
	10-12yrs education	1095 (7)	49	37	14	
	Higher education	1007 (7)	46	41	13	
Husband's Level of Education	No education	5113 (33)	52	41	6	<0.001
	5-years education	2234 (15)	50	43	6	
	8-years education	1566 (10)	54	38	8	
	10-12yrs education	2225 (15)	52	40	8	
	Higher education	2237 (15)	49	43	8	
Husband's Income Status	Low income	8595 (56)	54	39	6	<0.001
	Middle income	4526 (30)	48	44	7	
	High income	464 (3)	41	48	12	
Family Income Status	Low income	5660 (37)	53	40	7	<0.001
	Middle income	3026 (20)	53	39	8	
	High income	6633 (43)	50	39	11	

Source: Author's calculations

Appendix Table 6.4.4: Medical Treatment-related Autonomy and Determinants (χ^2 results)

Determinants		Observations (%)	Levels of Autonomy			Significance (P-value)
			No (%)	Partial (%)	Strong (%)	
Employment Status	Unemployed	13879 (91)	49	39	12	<0.001
	Employed	1440 (9)	35	43	21	
Household Size	Below Average	5503 (36)	39	44	17	<0.001
	Average	1908 (12)	45	41	15	
	Above Average	7908 (52)	55	36	9	
Household Size Excluding Children	Below Average	5823 (38)	37	47	16	<0.001
	Average	2229 (15)	48	39	13	
	Above Average	7267 (47)	56	34	10	
Number of Sons	No son	3796 (25)	56	33	11	<0.001
	1 son	3727 (24)	50	37	13	
	2 & more sons	7796 (51)	43	43	14	
Number of Daughters	No daughter	4226 (28)	56	34	10	<0.001
	1 daughter	4087 (27)	48	39	13	
	2 & more daughters	7006 (46)	43	43	14	
Family Formation	Nuclear	1981 (13)	39	44	17	<0.001
	Extended	13338 (87)	49	39	12	
Mother-in-Law	Present	15168 (99)	48	39	13	<0.001
	Not Present	151 (1)	71	18	11	
Age Structure	15-19 years	781 (5)	65	30	5	<0.001
	20-24 years	2504 (16)	60	33	7	
	25-29 years	3184 (21)	52	36	11	
	30-34 years	2655 (17)	47	41	12	
	35-39 years	2642 (17)	39	45	16	
	40-44 years	2086 (14)	39	43	18	
	45-49 years	1467 (10)	40	43	17	
Woman's Level of Education	No education	10792 (70)	50	40	10	<0.001
	5-years education	1649 (11)	43	39	18	
	8-years education	741 (5)	43	37	21	
	10-12yrs education	1095 (7)	43	36	21	
	Higher education	1007 (7)	40	38	22	
Husband's Level of Education	No education	5113 (33)	49	42	9	<0.001
	5-years education	2234 (15)	47	42	11	
	8-years education	1566 (10)	49	38	13	
	10-12yrs education	2225 (15)	49	38	13	
	Higher education	2237 (15)	44	42	13	
Husband's Income Status	Low income	8595 (56)	51	39	10	<0.001
	Middle income	4526 (30)	44	44	13	
	High income	464 (3)	34	44	22	
Family Income Status	Low income	5660 (37)	50	40	10	<0.001
	Middle income	3026 (20)	50	39	11	
	High income	6633 (43)	46	39	16	

Source: Author's calculations

Appendix Table 6.5.1: Family Planning (use of contraceptive) Autonomy and Determinants (χ^2 results)

Determinants		Observations (%)	Levels of Autonomy			Significance (P-value)
			No (%)	Partial (%)	Strong (%)	
Employment Status	Unemployed	13879 (91)	32	64	4	<0.001
	Employed	1440 (9)	23	73	4	
Household Size	Below Average	5503 (36)	30	66	5	<0.001
	Average	1908 (12)	31	66	4	
	Above Average	7908 (52)	32	64	4	
Household Size Excluding Children	Below Average	5823 (38)	30	65	5	<0.001
	Average	2229 (15)	33	63	4	
	Above Average	7267 (47)	31	66	3	
Number of Sons	No son	3796 (25)	36	61	4	<0.001
	1 son	3727 (24)	31	65	4	
	2 & more sons	7796 (51)	29	67	4	
Number of Daughters	No daughter	4226 (28)	36	61	4	<0.001
	1 daughter	4087 (27)	29	67	4	
	2 & more daughters	7006 (46)	29	66	4	
Family Formation	Nuclear	1981 (13)	33	62	4	<0.001
	Extended	13338 (87)	31	65	4	
Mother-in-Law	Present	15168 (99)	31	65	4	0.666
	Not Present	151 (1)	29	66	5	
Age Structure	15-19 years	781 (5)	38	59	4	<0.001
	20-24 years	2504 (16)	33	63	4	
	25-29 years	3184 (21)	30	66	4	
	30-34 years	2655 (17)	31	66	4	
	35-39 years	2642 (17)	29	67	4	
	40-44 years	2086 (14)	31	65	5	
	45-49 years	1467 (10)	33	64	4	
Woman's Level of Education	No education	10792 (70)	36	60	5	<0.001
	5-years education	1649 (11)	23	74	3	
	8-years education	741 (5)	21	77	3	
	10-12yrs education	1095 (7)	20	77	3	
	Higher education	1007 (7)	14	84	2	
Husband's Level of Education	No education	5113 (33)	38	57	5	<0.001
	5-years education	2234 (15)	31	64	5	
	8-years education	1566 (10)	29	67	4	
	10-12yrs education	2225 (15)	27	70	3	
	Higher education	2237 (15)	22	75	3	
Husband's Income Status	Low income	8595 (56)	33	63	4	<0.001
	Middle income	4526 (30)	29	67	4	
	High income	464 (3)	19	79	2	
Family Income Status	Low income	5660 (37)	33	62	5	<0.001
	Middle income	3026 (20)	32	63	4	
	High income	6633 (43)	29	68	3	

Source: Author's calculations

Appendix Table 6.5.2: Family Planning (more children) Autonomy and Determinants (χ^2 results)

Determinants		Observations (%)	Levels of Autonomy			Significance (P-value)
			No (%)	Partial (%)	Strong (%)	
Employment Status	Unemployed	13879 (91)	36	61	4	<0.001
	Employed	1440 (9)	28	69	3	
Household Size	Below Average	5503 (36)	32	63	4	<0.001
	Average	1908 (12)	34	63	3	
	Above Average	7908 (52)	37	60	4	
Household Size Excluding Children	Below Average	5823 (38)	33	62	5	<0.001
	Average	2229 (15)	36	60	4	
	Above Average	7267 (47)	36	61	3	
Number of Sons	No son	3796 (25)	38	58	4	<0.001
	1 son	3727 (24)	34	62	3	
	2 & more sons	7796 (51)	34	62	4	
Number of Daughters	No daughter	4226 (28)	38	58	3	<0.001
	1 daughter	4087 (27)	32	64	3	
	2 & more daughters	7006 (46)	34	61	4	
Family Formation	Nuclear	1981 (13)	35	61	4	0.831
	Extended	13338 (87)	35	61	4	
Mother-in-Law	Present	15168 (99)	35	61	4	0.604
	Not Present	151 (1)	34	60	5	
Age Structure	15-19 years	781 (5)	40	56	5	<0.001
	20-24 years	2504 (16)	37	60	4	
	25-29 years	3184 (21)	34	63	3	
	30-34 years	2655 (17)	34	63	3	
	35-39 years	2642 (17)	34	62	4	
	40-44 years	2086 (14)	34	61	5	
	45-49 years	1467 (10)	36	60	4	
Woman's Level of Education	No education	10792 (70)	40	56	4	<0.001
	5-years education	1649 (11)	27	70	3	
	8-years education	741 (5)	23	75	2	
	10-12yrs education	1095 (7)	24	74	2	
	Higher education	1007 (7)	16	82	2	
Husband's Level of Education	No education	5113 (33)	43	52	4	<0.001
	5-years education	2234 (15)	35	60	6	
	8-years education	1566 (10)	32	64	4	
	10-12yrs education	2225 (15)	29	68	3	
	Higher education	2237 (15)	26	71	3	
Husband's Income Status	Low income	8595 (56)	37	58	4	<0.001
	Middle income	4526 (30)	33	64	4	
	High income	464 (3)	26	73	1	
Family Income Status	Low income	5660 (37)	38	57	4	<0.001
	Middle income	3026 (20)	36	60	4	
	High income	6633 (43)	31	66	3	

Source: Author's calculations

APPENDIX-II: Determinants of Women's Autonomy in Economic Decision-making

Appendix Table 7.1.2: Determinants of Women Autonomy in Economic Decision-making

Determinants		*Panel-I: Overall*						*Panel-II: Urban Region*						*Panel-III: Rural Region*					
		Ordered Logit[1]		*Multinomial Logit*				Ordered Logit[1]		*Multinomial Logit*				Ordered Logit[1]		*Multinomial Logit*			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.43	0.00	1.57	0.00	1.18	0.13	1.61	0.00	1.12	0.64	1.62	0.00	1.34	0.00	1.75	0.00	1.00	1.00
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.67	0.00	0.61	0.00	0.82	0.04	0.70	0.00	0.51	0.00	0.92	0.51	0.66	0.00	0.66	0.00	0.77	0.05
	Above Average	0.50	0.00	0.51	0.00	0.63	0.00	0.51	0.00	0.40	0.00	0.72	0.01	0.49	0.00	0.56	0.00	0.57	0.00
Household Size: No. of children	No child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boy no girl	1.10	0.29	1.21	0.07	0.93	0.60	1.22	0.22	1.32	0.15	1.10	0.69	1.01	0.91	1.15	0.28	0.82	0.25
	Girl no boy	1.26	0.01	1.24	0.04	1.14	0.33	1.50	0.01	1.33	0.14	1.41	0.13	1.11	0.37	1.16	0.24	0.95	0.76
	Boys/Girls (both)	1.30	0.00	1.30	0.01	1.15	0.28	1.68	0.00	1.71	0.01	1.33	0.17	1.09	0.42	1.14	0.27	0.99	0.95
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.83	0.01	0.80	0.04	0.90	0.25	0.80	0.07	0.70	0.06	0.93	0.62	0.82	0.04	0.83	0.16	0.87	0.24
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.19	0.00	1.07	0.91	0.10	0.00	0.11	0.01	0.50	0.59	0.32	0.00	0.22	0.00	1.67	0.42
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.11	0.35	1.07	0.58	1.08	0.74	0.94	0.77	0.86	0.60	1.00	0.99	1.26	0.10	1.20	0.19	1.17	0.58
	25-29 years	1.44	0.00	1.26	0.09	1.41	0.13	1.31	0.22	1.28	0.37	1.10	0.78	1.58	0.00	1.29	0.10	1.69	0.08
	30-34 years	1.68	0.00	1.28	0.11	1.75	0.02	1.64	0.05	1.14	0.67	1.63	0.18	1.75	0.00	1.37	0.08	1.81	0.06
	35-39 years	2.17	0.00	1.81	0.00	1.88	0.01	1.79	0.01	1.69	0.08	1.43	0.32	2.45	0.00	1.90	0.00	2.20	0.01
	40-44 years	2.89	0.00	2.22	0.00	2.40	0.00	2.52	0.00	2.07	0.04	1.96	0.06	3.08	0.00	2.29	0.00	2.66	0.00
	45-49 years	2.92	0.00	2.54	0.00	2.25	0.00	2.64	0.00	2.21	0.02	1.95	0.08	3.11	0.00	2.74	0.00	2.37	0.01
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.40	0.00	1.25	0.02	1.38	0.00	1.01	0.91	1.16	0.35	0.97	0.81	1.56	0.00	1.26	0.06	1.59	0.00
	8-years education	1.27	0.03	1.75	0.00	0.95	0.72	0.86	0.32	1.53	0.05	0.62	0.03	1.57	0.00	1.72	0.01	1.25	0.28
	10-12years education	1.46	0.00	1.48	0.00	1.31	0.05	0.99	0.97	1.21	0.31	0.90	0.57	1.75	0.00	1.51	0.05	1.65	0.02
	Higher education	1.59	0.00	2.00	0.00	1.23	0.16	1.05	0.73	1.79	0.01	0.79	0.19	1.81	0.02	1.72	0.09	1.57	0.19

continue …

Appendix Table 7.1.2 (…continued): Determinants of Women's Autonomy in Economic Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	0.97	0.71	0.95	0.56	1.04	0.77	0.98	0.89	1.05	0.74	0.93	0.30	0.98	0.82	0.89	0.31
	8-years education	1.00	0.96	0.95	0.61	1.05	0.70	1.04	0.78	1.07	0.71	0.99	0.95	0.94	0.58	0.89	0.36	1.03	0.85
	10-12years education	0.96	0.56	0.93	0.47	1.00	0.98	1.06	0.64	1.21	0.25	0.92	0.62	0.90	0.33	0.83	0.14	1.03	0.84
	Higher education	1.00	0.99	0.95	0.66	1.07	0.56	1.12	0.43	1.04	0.84	1.15	0.43	0.94	0.63	0.95	0.74	0.96	0.84
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.19	0.00	1.22	0.00	1.09	0.22	1.17	0.08	1.21	0.09	1.09	0.44	1.13	0.08	1.14	0.08	1.05	0.62
	High income	1.57	0.00	1.26	0.30	1.57	0.01	1.59	0.02	1.05	0.88	1.72	0.01	1.54	0.09	1.52	0.22	1.30	0.43
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.04	1.12	0.19	1.12	0.24	1.35	0.03	1.26	0.23	1.23	0.19	1.07	0.39	1.07	0.47	1.05	0.71
	High income	1.33	0.00	1.27	0.01	1.24	0.02	1.55	0.00	1.40	0.05	1.37	0.03	1.14	0.12	1.15	0.17	1.07	0.55
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.44	0.00	0.79	0.02	0.34	0.00	0.63	0.00	1.30	0.11	0.46	0.00	0.31	0.00	0.60	0.00	0.16	0.00
	NWFP	0.43	0.00	0.71	0.02	0.36	0.00	0.45	0.00	1.10	0.69	0.24	0.00	0.42	0.00	0.63	0.01	0.40	0.00
	Baluchistan	0.07	0.00	0.11	0.00	0.27	0.00	0.08	0.00	0.18	0.00	0.12	0.00	0.06	0.00	0.09	0.00	0.35	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; LR chi2 (29) = 3876.63; Prob > chi2 = 0.00; Log likelihood = -12041.13; Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 206.67 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; Design df = 1101; F (58, 1044) = 13.67; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df=527; F(29, 499)=13.12, P > F = 0.00. Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 206.67 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df = 527; F(58, 472) = 7.17; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574, F(29, 546) = 19.39, P>F=0.00. Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 206.67 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574; F(58,517) = 9.31; Prob > F = 0.00*

Appendix Table 7.1.3: Determinants of Women's Autonomy in Economic Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.43	0.00	1.58	0.00	1.18	0.13	1.61	0.00	1.13	0.62	1.62	0.00	1.34	0.00	1.75	0.00	1.00	1.00
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.67	0.00	0.62	0.00	0.82	0.04	0.71	0.00	0.51	0.00	0.92	0.50	0.66	0.00	0.67	0.00	0.77	0.05
	Above Average	0.51	0.00	0.51	0.00	0.63	0.00	0.52	0.00	0.41	0.00	0.73	0.01	0.49	0.00	0.56	0.00	0.57	0.00
Household Size: No. of children	No Child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boys no Girl	1.11	0.27	1.22	0.06	0.93	0.61	1.24	0.19	1.33	0.13	1.11	0.65	1.01	0.92	1.15	0.26	0.81	0.23
	Girls no boy	1.26	0.01	1.25	0.04	1.14	0.33	1.52	0.01	1.34	0.13	1.43	0.12	1.11	0.37	1.17	0.23	0.94	0.74
	Boys = Girls	1.26	0.02	1.22	0.07	1.15	0.32	1.52	0.01	1.56	0.03	1.25	0.30	1.09	0.44	1.08	0.55	1.04	0.83
	Girls > Boys	1.35	0.00	1.38	0.00	1.16	0.32	1.87	0.00	1.81	0.01	1.47	0.11	1.08	0.53	1.21	0.15	0.93	0.70
	Boys > Girls	1.34	0.00	1.35	0.01	1.15	0.30	1.82	0.00	1.85	0.01	1.37	0.16	1.10	0.45	1.18	0.23	0.97	0.87
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.81	0.01	0.79	0.03	0.90	0.24	0.76	0.03	0.68	0.05	0.90	0.48	0.82	0.05	0.82	0.13	0.89	0.33
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.19	0.00	1.07	0.90	0.10	0.00	0.10	0.01	0.49	0.58	0.32	0.00	0.22	0.00	1.65	0.43
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.11	0.35	1.07	0.58	1.08	0.74	0.93	0.75	0.86	0.59	1.00	1.00	1.26	0.10	1.20	0.19	1.17	0.58
	25-29 years	1.44	0.00	1.25	0.09	1.41	0.13	1.30	0.23	1.27	0.38	1.10	0.80	1.58	0.00	1.29	0.11	1.69	0.08
	30-34 years	1.68	0.00	1.26	0.12	1.75	0.02	1.60	0.05	1.12	0.71	1.61	0.19	1.75	0.00	1.36	0.08	1.82	0.05
	35-39 years	2.16	0.00	1.78	0.00	1.88	0.01	1.75	0.02	1.65	0.10	1.41	0.34	2.45	0.00	1.88	0.00	2.22	0.01
	40-44 years	2.86	0.00	2.18	0.00	2.40	0.00	2.43	0.00	2.00	0.05	1.91	0.07	3.08	0.00	2.25	0.00	2.69	0.00
	45-49 years	2.88	0.00	2.48	0.00	2.24	0.00	2.55	0.00	2.14	0.02	1.90	0.09	3.12	0.00	2.68	0.00	2.41	0.01

continue …

Appendix Table 7.1.3 (…continued): Determinants of Women's Autonomy in Economic Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.41	0.00	1.26	0.02	1.38	0.00	1.02	0.85	1.17	0.34	0.97	0.85	1.56	0.00	1.26	0.06	1.58	0.00
	8-years education	1.27	0.03	1.76	0.00	0.95	0.73	0.87	0.35	1.55	0.04	0.63	0.04	1.57	0.00	1.72	0.01	1.25	0.27
	10-12years education	1.46	0.00	1.48	0.00	1.31	0.05	1.00	1.00	1.21	0.30	0.91	0.58	1.75	0.00	1.52	0.05	1.65	0.02
	Higher education	1.59	0.00	2.01	0.00	1.23	0.16	1.06	0.70	1.80	0.01	0.79	0.20	1.81	0.02	1.72	0.08	1.57	0.19
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	0.97	0.71	0.95	0.56	1.04	0.75	0.98	0.90	1.05	0.74	0.93	0.30	0.98	0.82	0.89	0.30
	8-years education	1.00	0.97	0.95	0.61	1.05	0.70	1.04	0.77	1.07	0.71	0.99	0.94	0.94	0.58	0.89	0.36	1.03	0.85
	10-12years education	0.96	0.56	0.93	0.47	1.00	0.97	1.06	0.60	1.21	0.24	0.92	0.63	0.90	0.33	0.83	0.14	1.03	0.83
	Higher education	1.00	1.00	0.95	0.66	1.08	0.56	1.12	0.42	1.04	0.83	1.15	0.43	0.94	0.63	0.95	0.73	0.96	0.83
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.18	0.00	1.21	0.00	1.09	0.22	1.16	0.10	1.21	0.09	1.08	0.47	1.13	0.08	1.14	0.08	1.05	0.59
	High income	1.56	0.00	1.25	0.31	1.57	0.01	1.56	0.03	1.03	0.92	1.70	0.01	1.54	0.08	1.51	0.23	1.31	0.42
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.03	1.13	0.18	1.12	0.24	1.35	0.03	1.26	0.23	1.24	0.18	1.07	0.40	1.08	0.45	1.04	0.74
	High income	1.34	0.00	1.27	0.01	1.24	0.02	1.56	0.00	1.41	0.05	1.38	0.03	1.14	0.12	1.16	0.16	1.07	0.59
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.44	0.00	0.79	0.02	0.34	0.00	0.63	0.00	1.30	0.11	0.46	0.00	0.31	0.00	0.60	0.00	0.16	0.00
	NWFP	0.43	0.00	0.71	0.02	0.36	0.00	0.45	0.00	1.10	0.69	0.24	0.00	0.42	0.00	0.63	0.01	0.40	0.00
	Baluchistan	0.07	0.00	0.11	0.00	0.26	0.00	0.08	0.00	0.18	0.00	0.12	0.00	0.06	0.00	0.09	0.00	0.34	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; LR chi2 (31) = 3877.18; Prob > chi2 = 0.00; Log likelihood = -12040.86; Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; Design df = 1101; F (62, 1040) = 13.08; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df=527; F(31, 497)=12.76, P > F = 0.00. Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df = 527; F(32, 466) = 6.90; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574, F(31, 544) = 18.72, P>F=0.00. Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574; F(62,513) = 8.88; Prob > F = 0.00*

Appendix Table 7.1.4: Determinants of Women's Autonomy in Economic Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.43	0.00	1.58	0.00	1.18	0.13	1.61	0.00	1.13	0.62	1.62	0.00	1.34	0.00	1.75	0.00	1.00	1.00
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.67	0.00	0.62	0.00	0.82	0.04	0.71	0.00	0.51	0.00	0.92	0.50	0.66	0.00	0.67	0.00	0.77	0.05
	Above Average	0.51	0.00	0.51	0.00	0.63	0.00	0.52	0.00	0.41	0.00	0.73	0.01	0.49	0.00	0.56	0.00	0.57	0.00
Household Size: No. of Children	Boys = Girls	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.80	0.02	0.82	0.07	0.87	0.32	0.66	0.01	0.64	0.03	0.80	0.30	0.92	0.44	0.93	0.55	0.96	0.83
	Boys no girl	0.88	0.11	1.00	0.96	0.81	0.16	0.82	0.11	0.86	0.31	0.89	0.49	0.93	0.46	1.07	0.53	0.78	0.11
	Girls no boy	1.01	0.93	1.02	0.83	1.00	0.99	1.00	0.99	0.86	0.44	1.14	0.44	1.01	0.91	1.08	0.51	0.91	0.53
	Girls > Boys	1.07	0.32	1.13	0.17	1.01	0.91	1.23	0.08	1.16	0.40	1.17	0.21	0.99	0.89	1.12	0.27	0.90	0.40
	Boys > Girls	1.07	0.39	1.11	0.25	1.01	0.94	1.19	0.17	1.19	0.35	1.10	0.51	1.00	0.97	1.09	0.39	0.94	0.61
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.81	0.01	0.79	0.03	0.90	0.24	0.76	0.03	0.68	0.05	0.90	0.48	0.82	0.05	0.82	0.13	0.89	0.33
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.19	0.00	1.07	0.90	0.10	0.00	0.10	0.01	0.49	0.58	0.32	0.00	0.22	0.00	1.65	0.43
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.11	0.35	1.07	0.58	1.08	0.74	0.93	0.75	0.86	0.59	1.00	1.00	1.26	0.10	1.20	0.19	1.17	0.58
	25-29 years	1.44	0.00	1.25	0.09	1.41	0.13	1.30	0.23	1.27	0.38	1.10	0.80	1.58	0.00	1.29	0.11	1.69	0.08
	30-34 years	1.68	0.00	1.26	0.12	1.75	0.02	1.60	0.05	1.12	0.71	1.61	0.19	1.75	0.00	1.36	0.08	1.82	0.05
	35-39 years	2.16	0.00	1.78	0.00	1.88	0.01	1.75	0.02	1.65	0.10	1.41	0.34	2.45	0.00	1.88	0.00	2.22	0.01
	40-44 years	2.86	0.00	2.18	0.00	2.40	0.00	2.43	0.00	2.00	0.05	1.91	0.07	3.08	0.00	2.25	0.00	2.69	0.00
	45-49 years	2.88	0.00	2.48	0.00	2.24	0.00	2.55	0.00	2.14	0.02	1.90	0.09	3.12	0.00	2.68	0.00	2.41	0.01

continue …

Appendix Table 7.1.4 (…continued): Determinants of Women's Autonomy in Economic Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.41	0.00	1.26	0.02	1.38	0.00	1.02	0.85	1.17	0.34	0.97	0.85	1.56	0.00	1.26	0.06	1.58	0.00
	8-years education	1.27	0.03	1.76	0.00	0.95	0.73	0.87	0.35	1.55	0.04	0.63	0.04	1.57	0.00	1.72	0.01	1.25	0.27
	10-12years education	1.46	0.00	1.48	0.00	1.31	0.05	1.00	1.00	1.21	0.30	0.91	0.58	1.75	0.00	1.52	0.05	1.65	0.02
	Higher education	1.59	0.00	2.01	0.00	1.23	0.16	1.06	0.70	1.80	0.01	0.79	0.20	1.81	0.02	1.72	0.08	1.57	0.19
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	0.97	0.71	0.95	0.56	1.04	0.75	0.98	0.90	1.05	0.74	0.93	0.30	0.98	0.82	0.89	0.30
	8-years education	1.00	0.97	0.95	0.61	1.05	0.70	1.04	0.77	1.07	0.71	0.99	0.94	0.94	0.58	0.89	0.36	1.03	0.85
	10-12years education	0.96	0.56	0.93	0.47	1.00	0.97	1.06	0.60	1.21	0.24	0.92	0.63	0.90	0.33	0.83	0.14	1.03	0.83
	Higher education	1.00	1.00	0.95	0.66	1.08	0.56	1.12	0.42	1.04	0.83	1.15	0.43	0.94	0.63	0.95	0.73	0.96	0.83
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.18	0.00	1.21	0.00	1.09	0.22	1.16	0.10	1.21	0.09	1.08	0.47	1.13	0.08	1.14	0.08	1.05	0.59
	High income	1.56	0.00	1.25	0.31	1.57	0.01	1.56	0.03	1.03	0.92	1.70	0.01	1.54	0.08	1.51	0.23	1.31	0.42
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.03	1.13	0.18	1.12	0.24	1.35	0.03	1.26	0.23	1.24	0.18	1.07	0.40	1.08	0.45	1.04	0.74
	High income	1.34	0.00	1.27	0.01	1.24	0.02	1.56	0.00	1.41	0.05	1.38	0.03	1.14	0.12	1.16	0.16	1.07	0.59
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.44	0.00	0.79	0.02	0.34	0.00	0.63	0.00	1.30	0.11	0.46	0.00	0.31	0.00	0.60	0.00	0.16	0.00
	NWFP	0.43	0.00	0.71	0.02	0.36	0.00	0.45	0.00	1.10	0.69	0.24	0.00	0.42	0.00	0.63	0.01	0.40	0.00
	Baluchistan	0.07	0.00	0.11	0.00	0.26	0.00	0.08	0.00	0.18	0.00	0.12	0.00	0.06	0.00	0.09	0.00	0.34	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; LR chi2 (31) = 3877.18; Prob > chi2 = 0.00; Log likelihood = -12040.86; Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; Design df = 1101; F (62, 1040) = 13.08; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df=527; F(31, 497)=12.76, P > F = 0.00. Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df = 527; F(32, 466) = 6.90; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574, F(31, 544) = 18.72, P>F=0.00. Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574; F(62,513) = 8.88; Prob > F = 0.00*

Appendix Table 7.1.5: Determinants of Women's Autonomy in Economic Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.43	0.00	1.58	0.00	1.18	0.13	1.61	0.00	1.13	0.62	1.62	0.00	1.34	0.00	1.75	0.00	1.00	1.00
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.67	0.00	0.62	0.00	0.82	0.04	0.71	0.00	0.51	0.00	0.92	0.50	0.66	0.00	0.67	0.00	0.77	0.05
	Above Average	0.51	0.00	0.51	0.00	0.63	0.00	0.52	0.00	0.41	0.00	0.73	0.01	0.49	0.00	0.56	0.00	0.57	0.00
Household Size: No. of Children	Girls > Boys	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.74	0.00	0.72	0.00	0.86	0.32	0.54	0.00	0.55	0.01	0.68	0.11	0.93	0.53	0.82	0.15	1.08	0.70
	Boys no girl	0.82	0.02	0.88	0.20	0.80	0.15	0.67	0.00	0.74	0.12	0.76	0.12	0.94	0.54	0.95	0.68	0.88	0.39
	Girls no boy	0.94	0.46	0.90	0.33	0.99	0.92	0.82	0.17	0.74	0.16	0.97	0.88	1.02	0.83	0.96	0.77	1.02	0.93
	Boys = Girls	0.93	0.32	0.88	0.17	0.99	0.91	0.81	0.08	0.86	0.40	0.85	0.21	1.01	0.89	0.89	0.27	1.12	0.40
	Boys > girls	0.99	0.90	0.98	0.80	1.00	0.97	0.97	0.80	1.02	0.89	0.94	0.64	1.02	0.84	0.97	0.75	1.04	0.70
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.81	0.01	0.79	0.03	0.90	0.24	0.76	0.03	0.68	0.05	0.90	0.48	0.82	0.05	0.82	0.13	0.89	0.33
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.19	0.00	1.07	0.90	0.10	0.00	0.10	0.01	0.49	0.58	0.32	0.00	0.22	0.00	1.65	0.43
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.11	0.35	1.07	0.58	1.08	0.74	0.93	0.75	0.86	0.59	1.00	1.00	1.26	0.10	1.20	0.19	1.17	0.58
	25-29 years	1.44	0.00	1.25	0.09	1.41	0.13	1.30	0.23	1.27	0.38	1.10	0.80	1.58	0.00	1.29	0.11	1.69	0.08
	30-34 years	1.68	0.00	1.26	0.12	1.75	0.02	1.60	0.05	1.12	0.71	1.61	0.19	1.75	0.00	1.36	0.08	1.82	0.05
	35-39 years	2.16	0.00	1.78	0.00	1.88	0.01	1.75	0.02	1.65	0.10	1.41	0.34	2.45	0.00	1.88	0.00	2.22	0.01
	40-44 years	2.86	0.00	2.18	0.00	2.40	0.00	2.43	0.00	2.00	0.05	1.91	0.07	3.08	0.00	2.25	0.00	2.69	0.00
	45-49 years	2.88	0.00	2.48	0.00	2.24	0.00	2.55	0.00	2.14	0.02	1.90	0.09	3.12	0.00	2.68	0.00	2.41	0.01

continue …

Appendix Table 7.1.5 (…continued): Determinants of Women's Autonomy in Economic Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.41	0.00	1.26	0.02	1.38	0.00	1.02	0.85	1.17	0.34	0.97	0.85	1.56	0.00	1.26	0.06	1.58	0.00
	8-years education	1.27	0.03	1.76	0.00	0.95	0.73	0.87	0.35	1.55	0.04	0.63	0.04	1.57	0.00	1.72	0.01	1.25	0.27
	10-12years education	1.46	0.00	1.48	0.00	1.31	0.05	1.00	1.00	1.21	0.30	0.91	0.58	1.75	0.00	1.52	0.05	1.65	0.02
	Higher education	1.59	0.00	2.01	0.00	1.23	0.16	1.06	0.70	1.80	0.01	0.79	0.20	1.81	0.02	1.72	0.08	1.57	0.19
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	0.97	0.71	0.95	0.56	1.04	0.75	0.98	0.90	1.05	0.74	0.93	0.30	0.98	0.82	0.89	0.30
	8-years education	1.00	0.97	0.95	0.61	1.05	0.70	1.04	0.77	1.07	0.71	0.99	0.94	0.94	0.58	0.89	0.36	1.03	0.85
	10-12years education	0.96	0.56	0.93	0.47	1.00	0.97	1.06	0.60	1.21	0.24	0.92	0.63	0.90	0.33	0.83	0.14	1.03	0.83
	Higher education	1.00	1.00	0.95	0.66	1.08	0.56	1.12	0.42	1.04	0.83	1.15	0.43	0.94	0.63	0.95	0.73	0.96	0.83
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.18	0.00	1.21	0.00	1.09	0.22	1.16	0.10	1.21	0.09	1.08	0.47	1.13	0.08	1.14	0.08	1.05	0.59
	High income	1.56	0.00	1.25	0.31	1.57	0.01	1.56	0.03	1.03	0.92	1.70	0.01	1.54	0.08	1.51	0.23	1.31	0.42
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.03	1.13	0.18	1.12	0.24	1.35	0.03	1.26	0.23	1.24	0.18	1.07	0.40	1.08	0.45	1.04	0.74
	High income	1.34	0.00	1.27	0.01	1.24	0.02	1.56	0.00	1.41	0.05	1.38	0.03	1.14	0.12	1.16	0.16	1.07	0.59
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.44	0.00	0.79	0.02	0.34	0.00	0.63	0.00	1.30	0.11	0.46	0.00	0.31	0.00	0.60	0.00	0.16	0.00
	NWFP	0.43	0.00	0.71	0.02	0.36	0.00	0.45	0.00	1.10	0.69	0.24	0.00	0.42	0.00	0.63	0.01	0.40	0.00
	Baluchistan	0.07	0.00	0.11	0.00	0.26	0.00	0.08	0.00	0.18	0.00	0.12	0.00	0.06	0.00	0.09	0.00	0.34	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; LR chi2 (31) = 3877.18; Prob > chi2 = 0.00; Log likelihood = -12040.86; Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Sub-pop No. obs. = 13522; Design df = 1101; F (62, 1040) = 13.08; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df=527; F(31, 497)=12.76, P > F = 0.00. Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs = 5318; Design df = 527; F(32, 466) = 6.90; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574, F(31, 544) = 18.72, P>F=0.00. Pseudo R2 = 0.1387. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 207.2 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Sub-pop. No. of obs. = 8204; Design df = 574; F(62,513) = 8.88; Prob > F = 0.00.*

APPENDIX-III: Economic Decision-making Autonomy: Disaggregated Analysis.

Appendix Table 8.1.2: Determinants of Women's Autonomy in Economic Decision-making (Food autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.49	0.00	1.39	0.00	1.34	0.05	1.20	0.18	1.07	0.74	1.17	0.33	1.66	0.00	1.55	0.00	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.74	0.00	0.60	0.00	0.89	0.21	0.70	0.00	0.59	0.00	0.79	0.07	0.77	0.01	0.60	0.00	0.98	0.88
	Above Average	0.52	0.00	0.37	0.00	0.73	0.00	0.46	0.00	0.31	0.00	0.71	0.01	0.56	0.00	0.40	0.00	0.77	0.02
Household Size: No. of children	No child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boy no girl	1.08	0.47	1.20	0.16	0.99	0.93	1.31	0.12	1.35	0.18	1.13	0.57	0.97	0.80	1.12	0.47	0.92	0.61
	Girl no boy	1.14	0.19	1.38	0.01	0.96	0.75	1.36	0.04	1.59	0.02	1.09	0.64	0.99	0.91	1.22	0.25	0.87	0.43
	Boys/Girls	1.31	0.01	1.43	0.00	1.14	0.28	1.62	0.00	1.67	0.01	1.28	0.17	1.14	0.29	1.28	0.07	1.05	0.76
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.86	0.07	0.81	0.04	0.91	0.38	0.87	0.26	0.73	0.07	1.04	0.82	0.86	0.15	0.85	0.23	0.84	0.22
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.37	0.02	0.85	0.00	1.08	0.86	0.28	0.27	0.52	0.00	0.85	0.88	0.45	0.05	0.80	0.00	1.36	0.45
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.15	0.33	1.09	0.65	1.22	0.28	1.04	0.89	1.29	0.47	0.98	0.95	1.29	0.15	1.10	0.67	1.40	0.15
	25-29 years	1.28	0.10	1.13	0.53	1.42	0.07	1.20	0.54	1.36	0.40	1.23	0.55	1.42	0.06	1.13	0.57	1.58	0.06
	30-34 years	1.47	0.01	1.33	0.16	1.45	0.06	1.37	0.31	1.58	0.22	1.26	0.51	1.61	0.01	1.35	0.22	1.57	0.07
	35-39 years	1.72	0.00	1.49	0.06	1.78	0.01	1.47	0.18	1.97	0.07	1.26	0.50	1.97	0.00	1.41	0.16	2.20	0.00
	40-44 years	2.10	0.00	2.03	0.00	1.88	0.00	2.06	0.02	2.78	0.01	1.61	0.15	2.15	0.00	1.87	0.01	2.00	0.01
	45-49 years	2.00	0.00	2.48	0.00	1.65	0.04	2.04	0.04	3.12	0.00	1.62	0.24	2.06	0.00	2.45	0.00	1.63	0.10

continue…

Appendix Table 8.1.2 (…continued): Determinants of Women Autonomy in Economic Decision-making (Food autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.24	0.01	1.25	0.05	1.09	0.41	0.94	0.62	1.16	0.40	0.84	0.22	1.42	0.00	1.26	0.14	1.27	0.09
	8-years education	1.13	0.37	1.18	0.36	1.07	0.71	0.87	0.36	0.97	0.89	0.92	0.68	1.45	0.10	1.28	0.39	1.31	0.31
	10-12years education	1.24	0.04	1.64	0.00	0.91	0.53	1.08	0.54	1.38	0.10	0.91	0.59	1.24	0.32	1.80	0.02	0.79	0.35
	Higher education	1.42	0.01	1.16	0.43	1.34	0.07	1.20	0.22	1.02	0.93	1.22	0.32	1.49	0.22	1.14	0.74	1.47	0.27
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.83	0.01	0.89	0.19	0.87	0.14	0.78	0.03	0.74	0.07	0.91	0.55	0.86	0.06	0.94	0.52	0.88	0.27
	8-years education	0.98	0.79	0.83	0.12	1.13	0.27	0.94	0.64	0.77	0.15	1.12	0.49	0.96	0.72	0.81	0.16	1.15	0.34
	10-12years education	0.88	0.14	0.76	0.01	1.02	0.86	0.80	0.08	0.66	0.01	1.05	0.78	0.94	0.56	0.81	0.14	1.02	0.86
	Higher education	0.84	0.07	0.83	0.15	0.87	0.29	0.83	0.17	0.73	0.08	0.95	0.80	0.82	0.14	0.90	0.55	0.81	0.25
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.04	0.47	1.17	0.03	1.03	0.71	1.08	0.39	1.30	0.03	0.98	0.86	0.97	0.65	1.01	0.98	1.07	0.52
	High income	1.14	0.37	1.78	0.01	0.91	0.62	1.22	0.34	1.66	0.08	0.98	0.92	1.10	0.67	2.26	0.01	0.77	0.44
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.27	0.00	1.11	0.27	1.26	0.02	1.37	0.02	1.14	0.49	1.29	0.13	1.21	0.03	1.09	0.43	1.23	0.12
	High income	1.52	0.00	1.08	0.40	1.55	0.00	1.54	0.00	1.15	0.41	1.42	0.04	1.43	0.00	0.99	0.90	1.57	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.37	0.00	0.62	0.00	0.40	0.00	0.59	0.00	0.74	0.07	0.62	0.01	0.24	0.00	0.53	0.00	0.24	0.00
	NWFP	0.12	0.00	0.17	0.00	0.49	0.02	0.09	0.00	0.11	0.00	0.59	0.12	0.12	0.00	0.18	0.00	0.46	0.02
	Baluchistan	0.06	0.00	0.11	0.00	0.28	0.00	0.11	0.00	0.21	0.00	0.18	0.00	0.05	0.00	0.09	0.00	0.34	0.01

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (29) = 4361.63; Prob > chi2 = 0.00; Log likelihood = -11366.658; Pseudo R2 = 0.1610. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 291.27 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (58, 1044) = 352.67; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(29, 499)=12.64, P > F = 0.00. Pseudo R2 = 0.1610. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 291.27 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(58, 470) = 75.53; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. no. of Obs = 8204; Design df = 574, F(29, 546) = 18.23, P>F=0.00. Pseudo R2 = 0.1610. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 291.27 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (58,517) = 302.83; Prob > F = 0.00*

Appendix Table 8.1.3: Determinants of Women Autonomy in Economic Decision-making (Food autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.49	0.00	1.39	0.00	1.33	0.05	1.20	0.17	1.07	0.73	1.17	0.33	1.66	0.00	1.55	0.00	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.74	0.00	0.61	0.00	0.88	0.18	0.70	0.00	0.60	0.00	0.79	0.07	0.76	0.01	0.61	0.00	0.97	0.80
	Above Average	0.51	0.00	0.37	0.00	0.72	0.00	0.46	0.00	0.31	0.00	0.70	0.01	0.56	0.00	0.41	0.00	0.76	0.01
Household Size: No. of children	No Child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boys no Girl	1.07	0.49	1.22	0.14	0.98	0.85	1.30	0.12	1.38	0.16	1.11	0.61	0.96	0.76	1.13	0.44	0.91	0.56
	Girls no boy	1.13	0.20	1.39	0.01	0.95	0.69	1.36	0.04	1.61	0.02	1.08	0.68	0.98	0.88	1.23	0.23	0.86	0.40
	Boys = Girls	1.35	0.00	1.32	0.03	1.25	0.07	1.63	0.00	1.49	0.05	1.38	0.08	1.20	0.16	1.20	0.24	1.17	0.34
	Girls > Boys	1.28	0.02	1.57	0.00	1.04	0.78	1.60	0.01	1.79	0.01	1.21	0.36	1.08	0.54	1.41	0.03	0.93	0.66
	Boys > Girls	1.27	0.03	1.51	0.00	1.06	0.69	1.63	0.00	1.88	0.01	1.18	0.42	1.09	0.53	1.30	0.08	0.99	0.94
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.88	0.10	0.78	0.02	0.95	0.65	0.87	0.27	0.69	0.04	1.08	0.65	0.88	0.25	0.82	0.16	0.88	0.39
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.37	0.02	0.85	0.00	1.08	0.85	0.29	0.27	0.51	0.00	0.87	0.90	0.44	0.05	0.49	0.00	1.34	0.46
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.15	0.33	1.09	0.66	1.22	0.27	1.04	0.89	1.28	0.49	0.98	0.96	1.29	0.16	1.10	0.67	1.39	0.15
	25-29 years	1.29	0.10	1.12	0.54	1.43	0.06	1.20	0.54	1.34	0.42	1.24	0.53	1.42	0.05	1.13	0.58	1.58	0.06
	30-34 years	1.48	0.01	1.31	0.18	1.47	0.05	1.37	0.30	1.54	0.24	1.28	0.47	1.62	0.01	1.33	0.23	1.59	0.06
	35-39 years	1.73	0.00	1.47	0.07	1.81	0.00	1.47	0.18	1.91	0.09	1.29	0.46	1.99	0.00	1.39	0.17	2.24	0.00
	40-44 years	2.12	0.00	1.98	0.00	1.93	0.00	2.06	0.02	2.67	0.01	1.66	0.13	2.19	0.00	1.84	0.02	2.07	0.01
	45-49 years	2.03	0.00	2.40	0.00	1.71	0.02	2.04	0.04	2.99	0.01	1.67	0.21	2.11	0.00	2.39	0.00	1.70	0.08

continue…

Appendix Table 8.1.3 (…continued): Determinants of Women Autonomy in Economic Decision-making (Food autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.23	0.02	1.26	0.04	1.08	0.46	0.94	0.61	1.17	0.36	0.83	0.20	1.42	0.00	1.27	0.13	1.26	0.10
	8-years education	1.12	0.38	1.19	0.35	1.06	0.74	0.87	0.36	0.98	0.94	0.91	0.65	1.45	0.10	1.28	0.39	1.31	0.31
	10-12years education	1.24	0.05	1.65	0.00	0.90	0.50	1.08	0.54	1.39	0.10	0.90	0.57	1.23	0.34	1.81	0.02	0.78	0.33
	Higher education	1.42	0.01	1.17	0.42	1.33	0.08	1.20	0.22	1.03	0.89	1.21	0.33	1.48	0.23	1.14	0.74	1.47	0.27
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.83	0.01	0.89	0.19	0.87	0.13	0.78	0.03	0.74	0.07	0.91	0.55	0.86	0.06	0.93	0.52	0.88	0.26
	8-years education	0.98	0.79	0.83	0.11	1.13	0.27	0.94	0.64	0.77	0.16	1.12	0.49	0.96	0.72	0.81	0.15	1.15	0.35
	10-12years education	0.88	0.14	0.76	0.01	1.02	0.87	0.80	0.08	0.67	0.01	1.04	0.80	0.94	0.56	0.81	0.13	1.03	0.86
	Higher education	0.84	0.07	0.83	0.15	0.87	0.28	0.83	0.17	0.73	0.08	0.95	0.80	0.82	0.14	0.90	0.55	0.80	0.24
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.05	0.45	1.16	0.04	1.04	0.66	1.08	0.39	1.29	0.04	0.99	0.90	0.97	0.67	1.01	0.99	1.08	0.48
	High income	1.15	0.35	1.76	0.01	0.92	0.66	1.22	0.34	1.63	0.09	0.99	0.97	1.11	0.66	2.23	0.01	0.78	0.46
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.27	0.00	1.12	0.25	1.25	0.03	1.37	0.02	1.14	0.49	1.29	0.13	1.20	0.04	1.10	0.40	1.22	0.12
	High income	1.52	0.00	1.09	0.36	1.53	0.00	1.54	0.00	1.16	0.40	1.42	0.04	1.43	0.00	0.99	0.95	1.56	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.37	0.00	0.62	0.00	0.40	0.00	0.59	0.00	0.74	0.08	0.61	0.01	0.24	0.00	0.53	0.00	0.24	0.00
	NWFP	0.12	0.00	0.17	0.00	0.49	0.02	0.09	0.00	0.11	0.00	0.59	0.12	0.12	0.00	0.18	0.00	0.46	0.02
	Baluchistan	0.06	0.00	0.11	0.00	0.28	0.00	0.11	0.00	0.21	0.00	0.18	0.00	0.05	0.00	0.09	0.00	0.34	0.01

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 4364.15; Prob > chi2 = 0.00; Log likelihood = -11365.4; Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 366.02; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=11.78, P > F = 0.00. Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 73.79; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. no. of Obs = 8204; Design df = 574, F(31, 544) = 17.16, P>F=0.00. Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (62,513) = 281.73; Prob > F = 0.00*

Appendix Table 8.1.4: Determinants of Women Autonomy in Economic Decision-making (Food autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-II: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.49	0.00	1.39	0.00	1.33	0.05	1.20	0.17	1.07	0.73	1.17	0.33	1.66	0.00	1.55	0.00	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.74	0.00	0.61	0.00	0.88	0.18	0.70	0.00	0.60	0.00	0.79	0.07	0.76	0.01	0.61	0.00	0.97	0.80
	Above Average	0.51	0.00	0.37	0.00	0.72	0.00	0.46	0.00	0.31	0.00	0.70	0.01	0.56	0.00	0.41	0.00	0.76	0.01
Household Size: No. of Children	Boys = Girls	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.74	0.00	0.76	0.03	0.80	0.07	0.62	0.00	0.67	0.05	0.72	0.08	0.83	0.16	0.83	0.24	0.85	0.34
	Boys no girl	0.80	0.01	0.92	0.45	0.78	0.02	0.80	0.10	0.92	0.66	0.80	0.20	0.80	0.04	0.94	0.64	0.77	0.07
	Girls no boy	0.84	0.05	1.06	0.64	0.76	0.02	0.84	0.20	1.08	0.68	0.78	0.16	0.82	0.08	1.03	0.87	0.73	0.05
	Girls > Boys	0.95	0.50	1.19	0.08	0.83	0.06	0.99	0.90	1.20	0.27	0.87	0.34	0.90	0.29	1.18	0.22	0.79	0.09
	Boys > Girls	0.94	0.44	1.15	0.16	0.84	0.10	1.00	1.00	1.26	0.17	0.86	0.31	0.91	0.31	1.09	0.50	0.84	0.20
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.88	0.10	0.78	0.02	0.95	0.65	0.87	0.27	0.69	0.04	1.08	0.65	0.88	0.25	0.82	0.16	0.88	0.39
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.37	0.02	0.85	0.00	1.08	0.85	0.29	0.27	0.51	0.00	0.87	0.90	0.44	0.05	0.49	0.00	1.34	0.46
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.15	0.33	1.09	0.66	1.22	0.27	1.04	0.89	1.28	0.49	0.98	0.96	1.29	0.16	1.10	0.67	1.39	0.15
	25-29 years	1.29	0.10	1.12	0.54	1.43	0.06	1.20	0.54	1.34	0.42	1.24	0.53	1.42	0.05	1.13	0.58	1.58	0.06
	30-34 years	1.48	0.01	1.31	0.18	1.47	0.05	1.37	0.30	1.54	0.24	1.28	0.47	1.62	0.01	1.33	0.23	1.59	0.06
	35-39 years	1.73	0.00	1.47	0.07	1.81	0.00	1.47	0.18	1.91	0.09	1.29	0.46	1.99	0.00	1.39	0.17	2.24	0.00
	40-44 years	2.12	0.00	1.98	0.00	1.93	0.00	2.06	0.02	2.67	0.01	1.66	0.13	2.19	0.00	1.84	0.02	2.07	0.01
	45-49 years	2.03	0.00	2.40	0.00	1.71	0.02	2.04	0.04	2.99	0.01	1.67	0.21	2.11	0.00	2.39	0.00	1.70	0.08

continue…

Appendix Table 8.1.4 (…continued): Determinants of Women Autonomy in Economic Decision-making (Food autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.23	0.02	1.26	0.04	1.08	0.46	0.94	0.61	1.17	0.36	0.83	0.20	1.42	0.00	1.27	0.13	1.26	0.10
	8-years education	1.12	0.38	1.19	0.35	1.06	0.74	0.87	0.36	0.98	0.94	0.91	0.65	1.45	0.10	1.28	0.39	1.31	0.31
	10-12years education	1.24	0.05	1.65	0.00	0.90	0.50	1.08	0.54	1.39	0.10	0.90	0.57	1.23	0.34	1.81	0.02	0.78	0.33
	Higher education	1.42	0.01	1.17	0.42	1.33	0.08	1.20	0.22	1.03	0.89	1.21	0.33	1.48	0.23	1.14	0.74	1.47	0.27
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.83	0.01	0.89	0.19	0.87	0.13	0.78	0.03	0.74	0.07	0.91	0.55	0.86	0.06	0.93	0.52	0.88	0.26
	8-years education	0.98	0.79	0.83	0.11	1.13	0.27	0.94	0.64	0.77	0.16	1.12	0.49	0.96	0.72	0.81	0.15	1.15	0.35
	10-12years education	0.88	0.14	0.76	0.01	1.02	0.87	0.80	0.08	0.67	0.01	1.04	0.80	0.94	0.56	0.81	0.13	1.03	0.86
	Higher education	0.84	0.07	0.83	0.15	0.87	0.28	0.83	0.17	0.73	0.08	0.95	0.80	0.82	0.14	0.90	0.55	0.80	0.24
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.05	0.45	1.16	0.04	1.04	0.66	1.08	0.39	1.29	0.04	0.99	0.90	0.97	0.67	1.01	0.99	1.08	0.48
	High income	1.15	0.35	1.76	0.01	0.92	0.66	1.22	0.34	1.63	0.09	0.99	0.97	1.11	0.66	2.23	0.01	0.78	0.46
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.27	0.00	1.12	0.25	1.25	0.03	1.37	0.02	1.14	0.49	1.29	0.13	1.20	0.04	1.10	0.40	1.22	0.12
	High income	1.52	0.00	1.09	0.36	1.53	0.00	1.54	0.00	1.16	0.40	1.42	0.04	1.43	0.00	0.99	0.95	1.56	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.37	0.00	0.62	0.00	0.40	0.00	0.59	0.00	0.74	0.08	0.61	0.01	0.24	0.00	0.53	0.00	0.24	0.00
	NWFP	0.12	0.00	0.17	0.00	0.49	0.02	0.09	0.00	0.11	0.00	0.59	0.12	0.12	0.00	0.18	0.00	0.46	0.02
	Baluchistan	0.06	0.00	0.11	0.00	0.28	0.00	0.11	0.00	0.21	0.00	0.18	0.00	0.05	0.00	0.09	0.00	0.34	0.01

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 4364.15; Prob > chi2 = 0.00; Log likelihood = -11365.4; Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 336.02; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design DF=527; F (31, 497) =11.78, P > F = 0.00. Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 73.79; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 17.16, P>F=0.00. Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (62,513) = 281.73; Prob > F = 0.00*

Appendix Table 8.1.5: Determinants of Women Autonomy in Economic Decision-making (Food autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.49	0.00	1.39	0.00	1.33	0.05	1.20	0.17	1.07	0.73	1.17	0.33	1.66	0.00	1.55	0.00	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.74	0.00	0.61	0.00	0.88	0.18	0.70	0.00	0.60	0.00	0.79	0.07	0.76	0.01	0.61	0.00	0.97	0.80
	Above Average	0.51	0.00	0.37	0.00	0.72	0.00	0.46	0.00	0.31	0.00	0.70	0.01	0.56	0.00	0.41	0.00	0.76	0.01
Household Size: No. of Children	Girls > Boys	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.78	0.02	0.64	0.00	0.96	0.78	0.62	0.01	0.56	0.01	0.83	0.36	0.92	0.54	0.71	0.03	1.08	0.66
	Boys no girl	0.84	0.03	0.77	0.02	0.94	0.60	0.81	0.15	0.77	0.16	0.92	0.67	0.89	0.25	0.80	0.10	0.98	0.87
	Girls no boy	0.88	0.15	0.89	0.31	0.92	0.47	0.85	0.23	0.90	0.55	0.90	0.57	0.91	0.37	0.87	0.39	0.93	0.64
	Boys = Girls	1.05	0.50	0.84	0.08	1.21	0.06	1.01	0.90	0.84	0.27	1.15	0.34	1.11	0.29	0.85	0.22	1.27	0.09
	Boys > girls	0.99	0.87	0.96	0.67	1.02	0.84	1.01	0.88	1.05	0.74	0.98	0.90	1.01	0.94	0.92	0.46	1.06	0.61
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.88	0.10	0.78	0.02	0.95	0.65	0.87	0.27	0.69	0.04	1.08	0.65	0.88	0.25	0.82	0.16	0.88	0.39
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.37	0.02	0.85	0.00	1.08	0.85	0.29	0.27	0.51	0.00	0.87	0.90	0.44	0.05	0.49	0.00	1.34	0.46
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.15	0.33	1.09	0.66	1.22	0.27	1.04	0.89	1.28	0.49	0.98	0.96	1.29	0.16	1.10	0.67	1.39	0.15
	25-29 years	1.29	0.10	1.12	0.54	1.43	0.06	1.20	0.54	1.34	0.42	1.24	0.53	1.42	0.05	1.13	0.58	1.58	0.06
	30-34 years	1.48	0.01	1.31	0.18	1.47	0.05	1.37	0.30	1.54	0.24	1.28	0.47	1.62	0.01	1.33	0.23	1.59	0.06
	35-39 years	1.73	0.00	1.47	0.07	1.81	0.00	1.47	0.18	1.91	0.09	1.29	0.46	1.99	0.00	1.39	0.17	2.24	0.00
	40-44 years	2.12	0.00	1.98	0.00	1.93	0.00	2.06	0.02	2.67	0.01	1.66	0.13	2.19	0.00	1.84	0.02	2.07	0.01
	45-49 years	2.03	0.00	2.40	0.00	1.71	0.02	2.04	0.04	2.99	0.01	1.67	0.21	2.11	0.00	2.39	0.00	1.70	0.08

continue…

Appendix Table 8.1.5(…continued): Determinants of Women Autonomy in Economic Decision-making (Food autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit		***Multinomial Logit***				Ordered Logit		***Multinomial Logit***				Ordered Logit		***Multinomial Logit***			
				Partial to no autonomy		Strong to partial autonomy				Partial to no autonomy		Strong to partial autonomy				Partial to no autonomy		Strong to partial autonomy	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.23	0.02	1.26	0.04	1.08	0.46	0.94	0.61	1.17	0.36	0.83	0.20	1.42	0.00	1.27	0.13	1.26	0.10
	8-years education	1.12	0.38	1.19	0.35	1.06	0.74	0.87	0.36	0.98	0.94	0.91	0.65	1.45	0.10	1.28	0.39	1.31	0.31
	10-12years education	1.24	0.05	1.65	0.00	0.90	0.50	1.08	0.54	1.39	0.10	0.90	0.57	1.23	0.34	1.81	0.02	0.78	0.33
	Higher education	1.42	0.01	1.17	0.42	1.33	0.08	1.20	0.22	1.03	0.89	1.21	0.33	1.48	0.23	1.14	0.74	1.47	0.27
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.83	0.01	0.89	0.19	0.87	0.13	0.78	0.03	0.74	0.07	0.91	0.55	0.86	0.06	0.93	0.52	0.88	0.26
	8-years education	0.98	0.79	0.83	0.11	1.13	0.27	0.94	0.64	0.77	0.16	1.12	0.49	0.96	0.72	0.81	0.15	1.15	0.35
	10-12years education	0.88	0.14	0.76	0.01	1.02	0.87	0.80	0.08	0.67	0.01	1.04	0.80	0.94	0.56	0.81	0.13	1.03	0.86
	Higher education	0.84	0.07	0.83	0.15	0.87	0.28	0.83	0.17	0.73	0.08	0.95	0.80	0.82	0.14	0.90	0.55	0.80	0.24
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.05	0.45	1.16	0.04	1.04	0.66	1.08	0.39	1.29	0.04	0.99	0.90	0.97	0.67	1.01	0.99	1.08	0.48
	High income	1.15	0.35	1.76	0.01	0.92	0.66	1.22	0.34	1.63	0.09	0.99	0.97	1.11	0.66	2.23	0.01	0.78	0.46
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.27	0.00	1.12	0.25	1.25	0.03	1.37	0.02	1.14	0.49	1.29	0.13	1.20	0.04	1.10	0.40	1.22	0.12
	High income	1.52	0.00	1.09	0.36	1.53	0.00	1.54	0.00	1.16	0.40	1.42	0.04	1.43	0.00	0.99	0.95	1.56	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.37	0.00	0.62	0.00	0.40	0.00	0.59	0.00	0.74	0.08	0.61	0.01	0.24	0.00	0.53	0.00	0.24	0.00
	NWFP	0.12	0.00	0.17	0.00	0.49	0.02	0.09	0.00	0.11	0.00	0.59	0.12	0.12	0.00	0.18	0.00	0.46	0.02
	Baluchistan	0.06	0.00	0.11	0.00	0.28	0.00	0.11	0.00	0.21	0.00	0.18	0.00	0.05	0.00	0.09	0.00	0.34	0.01

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 4364.15; Prob > chi2 = 0.00; Log likelihood = -11365.4; Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 336.02; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design DF=527; F (31, 497) =11.78, P > F = 0.00. Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 73.79; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F (31, 544) = 17.16, P>F=0.00. Pseudo R2 = 0.1611. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 294.68 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (62,513) = 281.73; Prob > F = 0.00*

continue…

Appendix Table 8.2.2: Determinants of Women Autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.59	0.00	1.39	0.00	1.34	0.05	1.27	0.10	1.32	0.19	1.17	0.33	1.75	0.00	1.36	0.02	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.82	0.00	0.61	0.00	0.89	0.21	0.91	0.44	0.60	0.00	0.79	0.07	0.80	0.01	0.61	0.00	0.98	0.88
	Above Average	0.70	0.00	0.45	0.00	0.73	0.00	0.79	0.02	0.40	0.00	0.71	0.01	0.66	0.00	0.47	0.00	0.77	0.02
Household Size: No. of children	No child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boy no girl	1.17	0.12	1.25	0.06	0.99	0.93	1.29	0.13	1.53	0.04	1.13	0.57	1.07	0.59	1.12	0.42	0.92	0.61
	Girl no boy	1.15	0.12	1.26	0.05	0.96	0.75	1.36	0.05	1.35	0.12	1.09	0.64	0.99	0.91	1.21	0.20	0.87	0.43
	Boys/Girls	1.31	0.00	1.49	0.00	1.14	0.28	1.43	0.02	1.93	0.00	1.28	0.17	1.19	0.12	1.30	0.04	1.05	0.76
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.92	0.28	0.82	0.05	0.91	0.38	0.86	0.23	0.72	0.08	1.04	0.82	0.93	0.44	0.84	0.13	0.84	0.22
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.25	0.00	0.08	0.00	1.08	0.86	0.04	0.00	0.87	0.00	0.85	0.88	0.45	0.03	0.12	0.00	1.36	0.45
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.18	0.21	1.07	0.67	1.22	0.28	1.00	0.99	1.08	0.79	0.98	0.95	1.35	0.07	1.12	0.54	1.40	0.15
	25-29 years	1.27	0.09	1.08	0.63	1.42	0.07	1.20	0.49	1.22	0.52	1.23	0.55	1.35	0.09	1.08	0.70	1.58	0.06
	30-34 years	1.45	0.01	1.19	0.30	1.45	0.06	1.52	0.13	1.07	0.84	1.26	0.51	1.42	0.05	1.33	0.16	1.57	0.07
	35-39 years	1.85	0.00	1.60	0.01	1.78	0.01	1.57	0.09	1.54	0.21	1.26	0.50	2.02	0.00	1.70	0.01	2.20	0.00
	40-44 years	2.20	0.00	2.01	0.00	1.88	0.00	1.78	0.04	1.94	0.06	1.61	0.15	2.35	0.00	2.12	0.00	2.00	0.01
	45-49 years	2.23	0.00	2.31	0.00	1.65	0.04	2.17	0.01	2.34	0.02	1.62	0.24	2.20	0.00	2.46	0.00	1.63	0.10

continue…

Appendix Table 8.2.2 (…continued): Determinants of Women Autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.38	0.00	1.21	0.07	1.09	0.41	1.02	0.87	0.99	0.98	0.84	0.22	1.49	0.00	1.28	0.08	1.27	0.09
	8-years education	1.53	0.00	1.56	0.01	1.07	0.71	1.06	0.66	1.14	0.57	0.92	0.68	1.75	0.01	1.84	0.01	1.31	0.31
	10-12years education	1.56	0.00	1.50	0.01	0.91	0.53	1.02	0.89	1.07	0.76	0.91	0.59	1.76	0.00	1.94	0.00	0.79	0.35
	Higher education	2.42	0.00	1.38	0.09	1.34	0.07	1.61	0.00	1.10	0.69	1.22	0.32	1.97	0.02	1.63	0.16	1.47	0.27
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	1.04	0.64	0.87	0.14	0.99	0.91	0.98	0.92	0.91	0.55	0.96	0.59	1.05	0.64	0.88	0.27
	8-years education	1.11	0.20	0.90	0.32	1.13	0.27	1.19	0.19	0.97	0.89	1.12	0.49	1.03	0.79	0.82	0.14	1.15	0.34
	10-12years education	0.95	0.53	0.90	0.27	1.02	0.86	1.15	0.24	0.97	0.86	1.05	0.78	0.85	0.12	0.84	0.16	1.02	0.86
	Higher education	0.98	0.82	1.15	0.21	0.87	0.29	1.07	0.61	1.10	0.58	0.95	0.80	0.94	0.64	1.21	0.17	0.81	0.25
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.01	1.31	0.00	1.03	0.71	1.15	0.09	1.31	0.03	0.98	0.86	1.07	0.35	1.24	0.01	1.07	0.52
	High income	1.28	0.12	1.28	0.25	0.91	0.62	1.29	0.20	1.16	0.63	0.98	0.92	1.28	0.30	1.45	0.24	0.77	0.44
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.03	1.03	0.75	1.26	0.02	1.32	0.03	0.99	0.95	1.29	0.13	1.07	0.40	1.02	0.84	1.23	0.12
	High income	1.52	0.00	1.03	0.14	1.55	0.00	1.62	0.00	1.09	0.64	1.42	0.04	1.33	0.01	0.91	0.36	1.57	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.39	0.00	0.75	0.00	0.40	0.00	0.75	0.04	0.90	0.50	0.62	0.01	0.22	0.00	0.72	0.01	0.24	0.00
	NWFP	0.28	0.00	0.31	0.00	0.49	0.02	0.47	0.00	0.27	0.00	0.59	0.12	0.24	0.00	0.33	0.00	0.46	0.02
	Baluchistan	0.08	0.00	0.17	0.00	0.28	0.00	0.12	0.00	0.28	0.00	0.18	0.00	0.06	0.00	0.15	0.00	0.34	0.01

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (29) = 3789.29; Prob > chi2 = 0.00; Log likelihood = -12579.89; Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 543.32 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (58, 1044) = 14.21; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(29, 499)=10.33, P > F = 0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 543.32 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(58, 470) = 88.29; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(29, 546) = 21.05, P>F=0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 543.32 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(58,517) = 11.34; Prob > F = 0.00*

Appendix Table 8.2.3: Determinants of Women Autonomy in Economic Decision-making (Clothing and footwear autonomy)

		Panel-I: Overall						***Panel-II: Urban Region***						***Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.59	0.00	1.39	0.00	1.33	0.05	1.27	0.10	1.33	0.18	1.17	0.33	1.75	0.00	1.36	0.02	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.82	0.00	0.61	0.00	0.88	0.18	0.91	0.44	0.60	0.00	0.79	0.07	0.79	0.01	0.61	0.00	0.97	0.80
	Above Average	0.70	0.00	0.45	0.00	0.72	0.00	0.80	0.03	0.40	0.00	0.70	0.01	0.65	0.00	0.47	0.00	0.76	0.01
Household Size: No. of children	No Child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boys no Girl	1.17	0.12	1.26	0.05	0.98	0.85	1.31	0.11	1.54	0.04	1.11	0.61	1.06	0.63	1.13	0.41	0.91	0.56
	Girls no boy	1.15	0.12	1.27	0.05	0.95	0.69	1.38	0.05	1.36	0.11	1.08	0.68	0.98	0.87	1.22	0.19	0.86	0.40
	Boys = Girls	1.31	0.01	1.43	0.00	1.25	0.07	1.30	0.11	1.78	0.01	1.38	0.08	1.25	0.06	1.26	0.09	1.17	0.34
	Girls > Boys	1.36	0.00	1.49	0.00	1.04	0.78	1.65	0.00	1.93	0.00	1.21	0.36	1.14	0.31	1.31	0.07	0.93	0.66
	Boys > Girls	1.28	0.02	1.59	0.00	1.06	0.69	1.49	0.02	2.19	0.00	1.18	0.42	1.13	0.32	1.35	0.03	0.99	0.94
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.92	0.28	0.81	0.04	0.95	0.65	0.82	0.11	0.70	0.06	1.08	0.65	0.95	0.62	0.82	0.12	0.88	0.39
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.25	0.00	0.08	0.00	1.08	0.85	0.04	0.00	0.41	0.00	0.87	0.90	0.45	0.03	0.12	0.00	1.34	0.46
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.18	0.21	1.07	0.67	1.22	0.27	1.00	0.98	1.08	0.81	0.98	0.96	1.35	0.07	1.12	0.54	1.39	0.15
	25-29 years	1.27	0.09	1.08	0.64	1.43	0.06	1.18	0.51	1.21	0.54	1.24	0.53	1.35	0.08	1.07	0.71	1.58	0.06
	30-34 years	1.45	0.01	1.19	0.33	1.47	0.05	1.49	0.14	1.05	0.89	1.28	0.47	1.43	0.05	1.32	0.17	1.59	0.06
	35-39 years	1.85	0.00	1.58	0.01	1.81	0.00	1.54	0.10	1.51	0.23	1.29	0.46	2.04	0.00	1.69	0.01	2.24	0.00
	40-44 years	2.20	0.00	1.99	0.00	1.93	0.00	1.72	0.05	1.89	0.07	1.66	0.13	2.40	0.00	2.10	0.00	2.07	0.01
	45-49 years	2.23	0.00	2.27	0.00	1.71	0.02	2.09	0.01	2.27	0.02	1.67	0.21	2.24	0.00	2.43	0.00	1.70	0.08

continue…

Appendix Table 8.2.3 (…continued): Determinants of Women Autonomy in Economic Decision-making (Clothing and footwear autonomy)

		Panel-I: Overall						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.38	0.00	1.22	0.07	1.08	0.46	1.03	0.80	1.01	0.99	0.83	0.20	1.48	0.00	1.28	0.08	1.26	0.10
	8-years education	1.53	0.00	1.56	0.01	1.06	0.74	1.07	0.60	1.15	0.53	0.91	0.65	1.76	0.01	1.83	0.01	1.31	0.31
	10-12years education	1.56	0.00	1.50	0.01	0.90	0.50	1.02	0.86	1.07	0.74	0.90	0.57	1.75	0.00	1.95	0.00	0.78	0.33
	Higher education	2.42	0.00	1.39	0.09	1.33	0.08	1.62	0.00	1.11	0.67	1.21	0.33	1.96	0.02	1.63	0.16	1.47	0.27
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	1.04	0.63	0.87	0.13	0.99	0.94	0.99	0.94	0.91	0.55	0.96	0.59	1.05	0.64	0.88	0.26
	8-years education	1.11	0.20	0.90	0.32	1.13	0.27	1.19	0.19	0.98	0.90	1.12	0.49	1.03	0.80	0.82	0.14	1.15	0.35
	10-12years education	0.95	0.53	0.90	0.27	1.02	0.87	1.16	0.23	0.98	0.88	1.04	0.80	0.85	0.12	0.84	0.16	1.03	0.86
	Higher education	0.98	0.83	1.15	0.20	0.87	0.28	1.07	0.58	1.11	0.57	0.95	0.80	0.94	0.64	1.21	0.17	0.80	0.24
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.01	1.31	0.00	1.04	0.66	1.14	0.10	1.30	0.03	0.99	0.90	1.07	0.34	1.24	0.01	1.08	0.48
	High income	1.27	0.12	1.27	0.26	0.92	0.66	1.27	0.23	1.14	0.66	0.99	0.97	1.28	0.30	1.45	0.25	0.78	0.46
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.03	1.03	0.74	1.25	0.03	1.33	0.03	0.98	0.92	1.29	0.13	1.07	0.43	1.02	0.82	1.22	0.12
	High income	1.53	0.00	1.03	0.14	1.53	0.00	1.64	0.00	1.09	0.63	1.42	0.04	1.32	0.01	0.91	0.38	1.56	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.39	0.00	0.76	0.00	0.40	0.00	0.75	0.04	0.90	0.52	0.61	0.01	0.22	0.00	0.72	0.01	0.24	0.00
	NWFP	0.28	0.00	0.31	0.00	0.49	0.02	0.47	0.00	0.27	0.00	0.59	0.12	0.24	0.00	0.33	0.00	0.46	0.02
	Baluchistan	0.08	0.00	0.17	0.00	0.28	0.00	0.12	0.00	0.28	0.00	0.18	0.00	0.06	0.00	0.15	0.00	0.34	0.01

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 3789.81; Prob > chi2 = 0.00; Log likelihood = -12579.64; Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 13.49; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=9.66, P > F = 0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 81.90; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204;; Design df = 574, F(31, 544) = 19.91, P>F=0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 578; F(62,513) = 10.66; Prob > F = 0.00*

Appendix Table 8.2.4: Determinants of Women Autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.59	0.00	1.39	0.00	1.33	0.05	1.27	0.10	1.33	0.18	1.17	0.33	1.75	0.00	1.36	0.02	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.82	0.00	0.61	0.00	0.88	0.18	0.91	0.44	0.60	0.00	0.79	0.07	0.79	0.01	0.61	0.00	0.97	0.80
	Above Average	0.70	0.00	0.45	0.00	0.72	0.00	0.80	0.03	0.40	0.00	0.70	0.01	0.65	0.00	0.47	0.00	0.76	0.01
Household Size: No. of Children	Boys = Girls	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.77	0.01	0.70	0.00	0.80	0.07	0.77	0.11	0.56	0.01	0.72	0.08	0.80	0.06	0.79	0.09	0.85	0.34
	Boys no girl	0.89	0.15	0.88	0.19	0.78	0.02	1.00	0.97	0.87	0.47	0.80	0.20	0.85	0.12	0.89	0.34	0.77	0.07
	Girls no boy	0.88	0.15	0.88	0.28	0.76	0.02	1.06	0.70	0.76	0.17	0.78	0.16	0.78	0.03	0.97	0.80	0.73	0.05
	Girls > Boys	1.04	0.60	1.04	0.66	0.83	0.06	1.27	0.03	1.08	0.61	0.87	0.34	0.91	0.30	1.04	0.74	0.79	0.09
	Boys > Girls	0.98	0.75	1.11	0.26	0.84	0.10	1.15	0.25	1.23	0.24	0.86	0.31	0.90	0.24	1.07	0.52	0.84	0.20
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.92	0.28	0.81	0.04	0.95	0.65	0.82	0.11	0.70	0.06	1.08	0.65	0.95	0.62	0.82	0.12	0.88	0.39
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.25	0.00	0.08	0.00	1.08	0.85	0.04	0.00	0.41	0.00	0.87	0.90	0.45	0.03	0.12	0.00	1.34	0.46
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.18	0.21	1.07	0.67	1.22	0.27	1.00	0.98	1.08	0.81	0.98	0.96	1.35	0.07	1.12	0.54	1.39	0.15
	25-29 years	1.27	0.09	1.08	0.64	1.43	0.06	1.18	0.51	1.21	0.54	1.24	0.53	1.35	0.08	1.07	0.71	1.58	0.06
	30-34 years	1.45	0.01	1.19	0.33	1.47	0.05	1.49	0.14	1.05	0.89	1.28	0.47	1.43	0.05	1.32	0.17	1.59	0.06
	35-39 years	1.85	0.00	1.58	0.01	1.81	0.00	1.54	0.10	1.51	0.23	1.29	0.46	2.04	0.00	1.69	0.01	2.24	0.00
	40-44 years	2.20	0.00	1.99	0.00	1.93	0.00	1.72	0.05	1.89	0.07	1.66	0.13	2.40	0.00	2.10	0.00	2.07	0.01
	45-49 years	2.23	0.00	2.27	0.00	1.71	0.02	2.09	0.01	2.27	0.02	1.67	0.21	2.24	0.00	2.43	0.00	1.70	0.08

continue…

Appendix Table 8.2.4 (…continued): Determinants of Women Autonomy in Economic Decision-making (Cloth and footwear autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.38	0.00	1.22	0.07	1.08	0.46	1.03	0.80	1.01	0.99	0.83	0.20	1.48	0.00	1.28	0.08	1.26	0.10
	8-years education	1.53	0.00	1.56	0.01	1.06	0.74	1.07	0.60	1.15	0.53	0.91	0.65	1.76	0.01	1.83	0.01	1.31	0.31
	10-12years education	1.56	0.00	1.50	0.01	0.90	0.50	1.02	0.86	1.07	0.74	0.90	0.57	1.75	0.00	1.95	0.00	0.78	0.33
	Higher education	2.42	0.00	1.39	0.09	1.33	0.08	1.62	0.00	1.11	0.67	1.21	0.33	1.96	0.02	1.63	0.16	1.47	0.27
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	1.04	0.63	0.87	0.13	0.99	0.94	0.99	0.94	0.91	0.55	0.96	0.59	1.05	0.64	0.88	0.26
	8-years education	1.11	0.20	0.90	0.32	1.13	0.27	1.19	0.19	0.98	0.90	1.12	0.49	1.03	0.80	0.82	0.14	1.15	0.35
	10-12years education	0.95	0.53	0.90	0.27	1.02	0.87	1.16	0.23	0.98	0.88	1.04	0.80	0.85	0.12	0.84	0.16	1.03	0.86
	Higher education	0.98	0.83	1.15	0.20	0.87	0.28	1.07	0.58	1.11	0.57	0.95	0.80	0.94	0.64	1.21	0.17	0.80	0.24
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.01	1.31	0.00	1.04	0.66	1.14	0.10	1.30	0.03	0.99	0.90	1.07	0.34	1.24	0.01	1.08	0.48
	High income	1.27	0.12	1.27	0.26	0.92	0.66	1.27	0.23	1.14	0.66	0.99	0.97	1.28	0.30	1.45	0.25	0.78	0.46
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.03	1.03	0.74	1.25	0.03	1.33	0.03	0.98	0.92	1.29	0.13	1.07	0.43	1.02	0.82	1.22	0.12
	High income	1.53	0.00	1.03	0.14	1.53	0.00	1.64	0.00	1.09	0.63	1.42	0.04	1.32	0.01	0.91	0.38	1.56	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.39	0.00	0.76	0.00	0.40	0.00	0.75	0.04	0.90	0.52	0.61	0.01	0.22	0.00	0.72	0.01	0.24	0.00
	NWFP	0.28	0.00	0.31	0.00	0.49	0.02	0.47	0.00	0.27	0.00	0.59	0.12	0.24	0.00	0.33	0.00	0.46	0.02
	Baluchistan	0.08	0.00	0.17	0.00	0.28	0.00	0.12	0.00	0.28	0.00	0.18	0.00	0.06	0.00	0.15	0.00	0.34	0.01

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 3789.81; Prob > chi2 = 0.00; Log likelihood = -12579.64; Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 13.49; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=9.66, P > F = 0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 81.90; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 19.91, P>F=0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(62,513) = 10.66; Prob > F = 0.00*

Appendix Table 8.2.5: Determinants of Women Autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.59	0.00	1.39	0.00	1.33	0.05	1.27	0.10	1.33	0.18	1.17	0.33	1.75	0.00	1.36	0.02	1.46	0.05
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.82	0.00	0.61	0.00	0.88	0.18	0.91	0.44	0.60	0.00	0.79	0.07	0.79	0.01	0.61	0.00	0.97	0.80
	Above Average	0.70	0.00	0.45	0.00	0.72	0.00	0.80	0.03	0.40	0.00	0.70	0.01	0.65	0.00	0.47	0.00	0.76	0.01
Household Size: No. of Children	Girls > Boys	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.74	0.00	0.67	0.00	0.96	0.78	0.61	0.00	0.52	0.00	0.83	0.36	0.88	0.31	0.76	0.07	1.08	0.66
	Boys no girl	0.86	0.07	0.84	0.11	0.94	0.60	0.79	0.08	0.80	0.24	0.92	0.67	0.93	0.52	0.86	0.25	0.98	0.87
	Girls no boy	0.85	0.05	0.85	0.14	0.92	0.47	0.83	0.21	0.70	0.06	0.90	0.57	0.86	0.18	0.93	0.60	0.93	0.64
	Boys = Girls	0.96	0.60	0.96	0.66	1.21	0.06	0.79	0.03	0.92	0.61	1.15	0.34	1.10	0.30	0.96	0.74	1.27	0.09
	Boys > girls	0.94	0.30	1.06	0.44	1.02	0.84	0.90	0.27	1.13	0.41	0.98	0.90	0.99	0.92	1.03	0.73	1.06	0.61
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.92	0.28	0.81	0.04	0.95	0.65	0.82	0.11	0.70	0.06	1.08	0.65	0.95	0.62	0.82	0.12	0.88	0.39
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.25	0.00	0.08	0.00	1.08	0.85	0.04	0.00	0.41	0.00	0.87	0.90	0.45	0.03	0.12	0.00	1.34	0.46
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.18	0.21	1.07	0.67	1.22	0.27	1.00	0.98	1.08	0.81	0.98	0.96	1.35	0.07	1.12	0.54	1.39	0.15
	25-29 years	1.27	0.09	1.08	0.64	1.43	0.06	1.18	0.51	1.21	0.54	1.24	0.53	1.35	0.08	1.07	0.71	1.58	0.06
	30-34 years	1.45	0.01	1.19	0.33	1.47	0.05	1.49	0.14	1.05	0.89	1.28	0.47	1.43	0.05	1.32	0.17	1.59	0.06
	35-39 years	1.85	0.00	1.58	0.01	1.81	0.00	1.54	0.10	1.51	0.23	1.29	0.46	2.04	0.00	1.69	0.01	2.24	0.00
	40-44 years	2.20	0.00	1.99	0.00	1.93	0.00	1.72	0.05	1.89	0.07	1.66	0.13	2.40	0.00	2.10	0.00	2.07	0.01
	45-49 years	2.23	0.00	2.27	0.00	1.71	0.02	2.09	0.01	2.27	0.02	1.67	0.21	2.24	0.00	2.43	0.00	1.70	0.08

continue…

Appendix Table 8.2.5(…continued): Determinants of Women Autonomy in Economic Decision-making (Clothing and footwear autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.38	0.00	1.22	0.07	1.08	0.46	1.03	0.80	1.01	0.99	0.83	0.20	1.48	0.00	1.28	0.08	1.26	0.10
	8-years education	1.53	0.00	1.56	0.01	1.06	0.74	1.07	0.60	1.15	0.53	0.91	0.65	1.76	0.01	1.83	0.01	1.31	0.31
	10-12years education	1.56	0.00	1.50	0.01	0.90	0.50	1.02	0.86	1.07	0.74	0.90	0.57	1.75	0.00	1.95	0.00	0.78	0.33
	Higher education	2.42	0.00	1.39	0.09	1.33	0.08	1.62	0.00	1.11	0.67	1.21	0.33	1.96	0.02	1.63	0.16	1.47	0.27
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	0.95	0.42	1.04	0.63	0.87	0.13	0.99	0.94	0.99	0.94	0.91	0.55	0.96	0.59	1.05	0.64	0.88	0.26
	8-years education	1.11	0.20	0.90	0.32	1.13	0.27	1.19	0.19	0.98	0.90	1.12	0.49	1.03	0.80	0.82	0.14	1.15	0.35
	10-12years education	0.95	0.53	0.90	0.27	1.02	0.87	1.16	0.23	0.98	0.88	1.04	0.80	0.85	0.12	0.84	0.16	1.03	0.86
	Higher education	0.98	0.83	1.15	0.20	0.87	0.28	1.07	0.58	1.11	0.57	0.95	0.80	0.94	0.64	1.21	0.17	0.80	0.24
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.01	1.31	0.00	1.04	0.66	1.14	0.10	1.30	0.03	0.99	0.90	1.07	0.34	1.24	0.01	1.08	0.48
	High income	1.27	0.12	1.27	0.26	0.92	0.66	1.27	0.23	1.14	0.66	0.99	0.97	1.28	0.30	1.45	0.25	0.78	0.46
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.16	0.03	1.03	0.74	1.25	0.03	1.33	0.03	0.98	0.92	1.29	0.13	1.07	0.43	1.02	0.82	1.22	0.12
	High income	1.53	0.00	1.03	0.14	1.53	0.00	1.64	0.00	1.09	0.63	1.42	0.04	1.32	0.01	0.91	0.38	1.56	0.00
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.39	0.00	0.76	0.00	0.40	0.00	0.75	0.04	0.90	0.52	0.61	0.01	0.22	0.00	0.72	0.01	0.24	0.00
	NWFP	0.28	0.00	0.31	0.00	0.49	0.02	0.47	0.00	0.27	0.00	0.59	0.12	0.24	0.00	0.33	0.00	0.46	0.02
	Baluchistan	0.08	0.00	0.17	0.00	0.28	0.00	0.12	0.00	0.28	0.00	0.18	0.00	0.06	0.00	0.15	0.00	0.34	0.01

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 3789.81; Prob > chi2 = 0.00; Log likelihood = -1259.64; Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 13.49; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=9.66, P > F = 0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 81.90; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 19.91, P>F=0.00. Pseudo R2 = 0.1309. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 544.84 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (62,513) = 10.66; Prob > F = 0.00*

Appendix Table 8.3.2: Determinants of Women Autonomy in Economic Decision-making (Traveling and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[1]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.20	0.07	1.20	0.13	1.01	0.95	1.61	0.00	1.58	0.00	1.18	0.46	1.02	0.85	1.04	0.79	0.94	0.73
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.67	0.00	0.56	0.00	0.69	0.01	0.65	0.00	0.54	0.00	0.78	0.29	0.67	0.00	0.55	0.00	0.66	0.02
	Above Average	0.52	0.00	0.45	0.00	0.81	0.09	0.53	0.00	0.41	0.00	0.62	0.02	0.50	0.00	0.45	0.00	0.95	0.76
Household Size: No. of children	No child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boy no girl	0.96	0.72	1.04	0.70	0.70	0.11	1.05	0.75	1.09	0.62	0.80	0.50	0.90	0.41	0.99	0.97	0.62	0.11
	Girl no boy	1.18	0.07	1.21	0.05	0.88	0.52	1.31	0.09	1.33	0.11	0.93	0.82	1.11	0.33	1.14	0.24	0.83	0.44
	Boys/Girls	1.19	0.05	1.26	0.01	0.77	0.13	1.46	0.02	1.49	0.02	0.87	0.64	1.04	0.71	1.14	0.23	0.67	0.06
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.86	0.05	0.84	0.04	0.90	0.56	0.93	0.55	0.85	0.29	0.71	0.22	0.80	0.01	0.81	0.04	0.98	0.94
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.33	0.01	0.18	0.00	0.43	0.01	0.49	0.56	0.12	0.05	0.38	0.08	0.29	0.00	0.19	0.00	0.49	0.01
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	0.98	0.85	0.98	0.87	1.05	0.91	0.97	0.90	0.89	0.60	2.42	0.18	1.02	0.90	1.04	0.78	0.93	0.88
	25-29 years	1.33	0.03	1.23	0.12	1.54	0.34	1.60	0.04	1.28	0.30	4.05	0.03	1.27	0.12	1.22	0.20	1.23	0.65
	30-34 years	1.43	0.01	1.35	0.03	1.43	0.45	1.68	0.04	1.34	0.24	4.32	0.03	1.39	0.05	1.40	0.06	1.01	0.99
	35-39 years	1.94	0.00	1.75	0.00	1.93	0.17	1.97	0.01	1.53	0.08	4.91	0.02	2.06	0.00	1.93	0.00	1.55	0.39
	40-44 years	2.50	0.00	2.08	0.00	2.42	0.06	2.51	0.00	2.10	0.00	4.35	0.03	2.72	0.00	2.16	0.00	2.41	0.07
	45-49 years	2.91	0.00	2.56	0.00	2.31	0.07	2.60	0.00	2.05	0.01	4.86	0.02	3.42	0.00	3.07	0.00	2.10	0.12

continue…

Appendix Table 8.3.2 (…continued): Determinants of Women Autonomy in Economic Decision-making (Traveling and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.36	0.00	1.31	0.00	1.29	0.07	1.08	0.54	1.19	0.18	0.87	0.57	1.54	0.00	1.36	0.01	1.59	0.01
	8-years education	1.20	0.11	1.19	0.16	1.20	0.41	0.90	0.50	1.00	1.00	0.81	0.47	1.53	0.02	1.30	0.13	1.69	0.10
	10-12years education	1.26	0.04	1.04	0.73	1.94	0.00	0.97	0.82	1.31	0.08	1.90	0.01	1.74	0.00	1.69	0.01	1.48	0.15
	Higher education	1.18	0.23	0.95	0.75	2.26	0.00	0.94	0.73	0.78	0.15	1.84	0.05	1.71	0.04	1.54	0.11	1.77	0.25
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.58	1.09	0.22	0.88	0.34	1.25	0.08	1.32	0.03	0.98	0.93	0.94	0.38	0.99	0.87	0.83	0.26
	8-years education	0.93	0.39	0.82	0.13	1.34	0.11	1.03	0.84	0.91	0.53	1.32	0.39	0.87	0.19	0.78	0.13	1.31	0.21
	10-12years education	1.04	0.62	0.98	0.82	1.13	0.43	1.13	0.38	1.13	0.37	0.99	0.97	0.98	0.82	0.89	0.28	1.23	0.27
	Higher education	1.08	0.43	1.10	0.32	0.91	0.63	1.13	0.44	1.12	0.45	0.97	0.93	1.11	0.40	1.17	0.22	0.81	0.43
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.02	1.23	0.00	0.84	0.12	1.06	0.53	1.13	0.20	0.82	0.36	1.18	0.02	1.25	0.00	0.86	0.25
	High income	1.45	0.01	1.63	0.00	0.80	0.37	1.38	0.10	1.51	0.06	0.88	0.68	1.56	0.05	1.95	0.02	0.59	0.28
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.91	0.21	0.91	0.23	0.95	0.74	0.92	0.59	0.94	0.71	0.91	0.75	0.89	0.17	0.89	0.20	0.94	0.70
	High income	1.87	0.08	1.21	0.02	1.13	0.37	1.00	0.99	0.95	0.70	1.15	0.59	1.79	0.02	1.33	0.00	1.04	0.78
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.63	0.00	1.00	1.00	0.13	0.00	0.51	0.00	0.80	0.16	0.20	0.00	0.74	0.03	1.16	0.33	0.07	0.00
	NWFP	0.93	0.53	1.43	0.01	0.25	0.00	0.71	0.06	1.05	0.84	0.32	0.00	1.03	0.83	1.57	0.01	0.24	0.00
	Baluchistan	0.19	0.00	0.25	0.00	0.25	0.00	0.20	0.00	0.30	0.00	0.11	0.00	0.19	0.00	0.24	0.00	0.31	0.02

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (29) = 1730.78; Prob > chi2 = 0.00; Log likelihood = -11200.291; Pseudo R2 = 0.0717. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 585.16 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (58, 1044) = 12.80; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(29, 499)=6.92, P > F = 0.00. Pseudo R2 = 0.0717. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 585.16 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(58, 470) = 6.88; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(29, 546) = 11.04, P>F=0.00. Pseudo R2 = 0.0717. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 585.16 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(58,517) = 9.83; Prob > F = 0.00*

Appendix Table 8.3.3: Determinants of Women Autonomy in Economic Decision-making (Traveling and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.21	0.07	1.20	0.12	1.01	0.95	1.63	0.00	1.59	0.00	1.18	0.47	1.02	0.85	1.04	0.78	0.94	0.71
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.68	0.00	0.56	0.00	0.69	0.01	0.65	0.00	0.55	0.00	0.78	0.27	0.67	0.00	0.55	0.00	0.66	0.02
	Above Average	0.53	0.00	0.46	0.00	0.80	0.08	0.55	0.00	0.41	0.00	0.62	0.01	0.50	0.00	0.46	0.00	0.96	0.78
Household Size: No. of children	No Child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boys no Girl	0.97	0.78	1.05	0.63	0.70	0.12	1.08	0.65	1.11	0.55	0.81	0.53	0.90	0.43	1.00	1.00	0.62	0.11
	Girls no boy	1.18	0.06	1.21	0.04	0.88	0.53	1.34	0.07	1.35	0.09	0.94	0.85	1.11	0.33	1.15	0.23	0.83	0.44
	Boys = Girls	1.11	0.27	1.17	0.10	0.75	0.13	1.27	0.16	1.32	0.12	0.78	0.46	1.01	0.90	1.08	0.49	0.70	0.13
	Girls > Boys	1.21	0.06	1.25	0.03	0.82	0.29	1.57	0.01	1.54	0.02	0.95	0.88	1.03	0.79	1.11	0.38	0.69	0.12
	Boys > Girls	1.32	0.01	1.41	0.00	0.76	0.15	1.76	0.00	1.76	0.00	0.93	0.83	1.09	0.48	1.24	0.07	0.61	0.04
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.83	0.02	0.81	0.02	0.91	0.60	0.86	0.23	0.80	0.16	0.74	0.30	0.79	0.01	0.79	0.03	1.00	1.00
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.33	0.01	0.18	0.00	0.43	0.01	0.47	0.54	0.11	0.05	0.40	0.08	0.29	0.00	0.19	0.00	0.50	0.01
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	0.97	0.84	0.98	0.86	1.06	0.90	0.96	0.86	0.88	0.57	2.42	0.18	1.02	0.90	1.04	0.77	0.93	0.87
	25-29 years	1.32	0.03	1.22	0.13	1.54	0.34	1.58	0.05	1.27	0.32	4.01	0.03	1.27	0.12	1.22	0.21	1.23	0.65
	30-34 years	1.41	0.01	1.34	0.04	1.43	0.45	1.62	0.05	1.31	0.28	4.22	0.03	1.38	0.06	1.39	0.06	1.01	0.98
	35-39 years	1.91	0.00	1.71	0.00	1.94	0.17	1.89	0.01	1.48	0.10	4.81	0.02	2.04	0.00	1.91	0.00	1.57	0.37
	40-44 years	2.45	0.00	2.03	0.00	2.41	0.06	2.38	0.00	2.01	0.01	4.20	0.03	2.70	0.00	2.13	0.00	2.43	0.07
	45-49 years	2.83	0.00	2.49	0.00	2.30	0.07	2.45	0.00	1.96	0.02	4.70	0.02	3.38	0.00	3.01	0.00	2.14	0.11

…continue

Appendix Table 8.3.3 (…continued): Determinants of Women Autonomy in Economic Decision-making (Traveling and recreation autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.37	0.00	1.32	0.00	1.30	0.07	1.09	0.47	1.21	0.15	0.88	0.60	1.54	0.00	1.36	0.01	1.59	0.01
	8-years education	1.21	0.10	1.20	0.15	1.20	0.41	0.92	0.57	1.02	0.92	0.83	0.52	1.53	0.02	1.29	0.14	1.68	0.10
	10-12years education	1.27	0.04	1.05	0.70	1.94	0.00	0.98	0.88	1.30	0.09	1.91	0.01	1.75	0.00	1.70	0.01	1.47	0.16
	Higher education	1.19	0.21	0.96	0.78	2.26	0.00	0.95	0.78	0.79	0.17	1.86	0.05	1.71	0.04	1.54	0.11	1.76	0.25
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.57	1.09	0.22	0.88	0.35	1.26	0.07	1.32	0.03	0.98	0.92	0.94	0.38	0.99	0.88	0.83	0.25
	8-years education	0.93	0.39	0.82	0.13	1.34	0.11	1.03	0.84	0.91	0.53	1.32	0.39	0.87	0.19	0.78	0.12	1.31	0.21
	10-12years education	1.04	0.60	0.98	0.84	1.13	0.44	1.14	0.34	1.14	0.33	0.99	0.96	0.98	0.82	0.89	0.28	1.23	0.27
	Higher education	1.08	0.43	1.10	0.32	0.91	0.63	1.13	0.43	1.12	0.43	0.97	0.92	1.11	0.40	1.17	0.22	0.81	0.42
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.02	1.22	0.00	0.83	0.11	1.05	0.60	1.12	0.23	0.81	0.34	1.18	0.02	1.25	0.00	0.86	0.25
	High income	1.44	0.02	1.62	0.01	0.80	0.36	1.34	0.13	1.48	0.07	0.87	0.63	1.57	0.05	1.97	0.02	0.59	0.28
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.92	0.22	0.91	0.24	0.96	0.76	0.92	0.57	0.94	0.68	0.91	0.76	0.89	0.18	0.89	0.21	0.93	0.69
	High income	1.88	0.09	1.21	0.02	1.13	0.35	1.00	0.99	0.95	0.72	1.15	0.57	1.79	0.02	1.32	0.01	1.04	0.78
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.63	0.00	1.00	0.99	0.13	0.00	0.52	0.00	0.81	0.17	0.20	0.00	0.74	0.03	1.16	0.34	0.07	0.00
	NWFP	0.93	0.55	1.43	0.01	0.25	0.00	0.71	0.07	1.05	0.81	0.32	0.00	1.03	0.83	1.57	0.01	0.24	0.00
	Baluchistan	0.19	0.00	0.25	0.00	0.26	0.00	0.20	0.00	0.30	0.00	0.11	0.00	0.19	0.00	0.24	0.00	0.31	0.02

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 1740.08; Prob > chi2 = 0.00; Log likelihood = -11195.639; Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 12.25; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=6.70, P > F = 0.00. Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 6.76; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 10.63, P>F=0.00. Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204;; Design df = 574; F(62,513) = 9.52; Prob > F = 0.00*

Appendix Table 8.3.4: Determinants of Women Autonomy in Economic Decision-making (Traveling and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.21	0.07	1.20	0.12	1.01	0.95	1.63	0.00	1.59	0.00	1.18	0.47	1.02	0.85	1.04	0.78	0.94	0.71
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.68	0.00	0.56	0.00	0.69	0.01	0.65	0.00	0.55	0.00	0.78	0.27	0.67	0.00	0.55	0.00	0.66	0.02
	Above Average	0.53	0.00	0.46	0.00	0.80	0.08	0.55	0.00	0.41	0.00	0.62	0.01	0.50	0.00	0.46	0.00	0.96	0.78
Household Size: No. of Children	Boys = Girls	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.90	0.27	0.85	0.10	1.34	0.13	0.79	0.16	0.76	0.12	1.28	0.46	0.99	0.90	0.92	0.49	1.43	0.13
	Boys no girl	0.88	0.12	0.89	0.21	0.94	0.71	0.85	0.21	0.84	0.22	1.04	0.87	0.89	0.30	0.92	0.48	0.88	0.62
	Girls no boy	1.07	0.41	1.04	0.69	1.18	0.35	1.06	0.69	1.02	0.89	1.20	0.54	1.10	0.38	1.06	0.61	1.18	0.45
	Girls > Boys	1.09	0.21	1.07	0.39	1.09	0.58	1.24	0.07	1.17	0.24	1.22	0.36	1.02	0.83	1.03	0.77	0.98	0.93
	Boys > Girls	1.19	0.02	1.21	0.01	1.01	0.93	1.39	0.01	1.33	0.03	1.20	0.48	1.08	0.41	1.14	0.15	0.87	0.46
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.83	0.02	0.81	0.02	0.91	0.60	0.86	0.23	0.80	0.16	0.74	0.30	0.79	0.01	0.79	0.03	0.98	1.00
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.33	0.01	0.18	0.00	0.43	0.01	0.47	0.54	0.11	0.05	0.40	0.08	0.29	0.00	0.19	0.00	0.50	0.01
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	0.97	0.84	0.98	0.86	1.06	0.90	0.96	0.86	0.88	0.57	2.42	0.18	1.02	0.90	1.04	0.77	0.93	0.87
	25-29 years	1.32	0.03	1.22	0.13	1.54	0.34	1.58	0.05	1.27	0.32	4.01	0.03	1.27	0.12	1.22	0.21	1.23	0.65
	30-34 years	1.41	0.01	1.34	0.04	1.43	0.45	1.62	0.05	1.31	0.28	4.22	0.03	1.38	0.06	1.39	0.06	1.01	0.98
	35-39 years	1.91	0.00	1.71	0.00	1.94	0.17	1.89	0.01	1.48	0.10	4.81	0.02	2.04	0.00	1.91	0.00	1.57	0.37
	40-44 years	2.45	0.00	2.03	0.00	2.41	0.06	2.38	0.00	2.01	0.01	4.20	0.03	2.70	0.00	2.13	0.00	2.43	0.07
	45-49 years	2.83	0.00	2.49	0.00	2.30	0.07	2.45	0.00	1.96	0.02	4.70	0.02	3.38	0.00	3.01	0.00	2.14	0.11

continue…

Appendix Table 8.3.4 (…continued): Determinants of Women Autonomy in Economic Decision-making (Traveling and recreation autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.37	0.00	1.32	0.00	1.30	0.07	1.09	0.47	1.21	0.15	0.88	0.60	1.54	0.00	1.36	0.01	1.59	0.01
	8-years education	1.21	0.10	1.20	0.15	1.20	0.41	0.92	0.57	1.02	0.92	0.83	0.52	1.53	0.02	1.29	0.14	1.68	0.10
	10-12years education	1.27	0.04	1.05	0.70	1.94	0.00	0.98	0.88	1.30	0.09	1.91	0.01	1.75	0.00	1.70	0.01	1.47	0.16
	Higher education	1.19	0.21	0.96	0.78	2.26	0.00	0.95	0.78	0.79	0.17	1.86	0.05	1.71	0.04	1.54	0.11	1.76	0.25
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.57	1.09	0.22	0.88	0.35	1.26	0.07	1.32	0.03	0.98	0.92	0.94	0.38	0.99	0.88	0.83	0.25
	8-years education	0.93	0.40	0.82	0.13	1.34	0.11	1.04	0.82	0.91	0.55	1.30	0.40	0.87	0.20	0.78	0.12	1.31	0.21
	10-12years education	1.04	0.60	0.98	0.84	1.13	0.44	1.14	0.34	1.14	0.33	0.99	0.96	0.98	0.82	0.89	0.28	1.23	0.27
	Higher education	1.08	0.43	1.10	0.32	0.91	0.63	1.13	0.43	1.12	0.43	0.97	0.92	1.11	0.40	1.17	0.22	0.81	0.42
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.02	1.22	0.00	0.83	0.11	1.05	0.60	1.12	0.23	0.81	0.34	1.18	0.02	1.25	0.00	0.86	0.25
	High income	1.44	0.02	1.62	0.01	0.80	0.36	1.34	0.13	1.48	0.07	0.87	0.63	1.57	0.05	1.97	0.02	0.59	0.28
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.92	0.22	0.91	0.24	0.96	0.76	0.92	0.57	0.94	0.68	0.91	0.76	0.89	0.18	0.89	0.21	0.93	0.69
	High income	1.88	0.09	1.21	0.02	1.13	0.35	1.00	0.99	0.95	0.72	1.15	0.57	1.79	0.02	1.32	0.01	1.04	0.78
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.63	0.00	1.00	0.99	0.13	0.00	0.52	0.00	0.81	0.17	0.20	0.00	0.74	0.03	1.16	0.34	0.07	0.00
	NWFP	0.93	0.55	1.43	0.01	0.25	0.00	0.71	0.07	1.05	0.81	0.32	0.00	1.03	0.83	1.57	0.01	0.24	0.00
	Baluchistan	0.19	0.00	0.25	0.00	0.26	0.00	0.20	0.00	0.30	0.00	0.11	0.00	0.19	0.00	0.24	0.00	0.31	0.02

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 1740.08; Prob > chi2 = 0.00; Log likelihood = -11195.639; Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 12.25; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=6.70, P > F = 0.00. Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 6.76; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 10.63, P>F=0.00. Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(62,513) = 9.52; Prob > F = 0.00*

Appendix Table 8.3.5: Determinants of Women Autonomy in Economic Decision-making (Traveling and recreation autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.21	0.07	1.20	0.12	1.01	0.95	1.63	0.00	1.59	0.00	1.18	0.47	1.02	0.85	1.04	0.78	0.94	0.71
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.68	0.00	0.56	0.00	0.69	0.01	0.65	0.00	0.55	0.00	0.78	0.27	0.67	0.00	0.55	0.00	0.66	0.02
	Above Average	0.53	0.00	0.46	0.00	0.80	0.08	0.55	0.00	0.41	0.00	0.62	0.01	0.50	0.00	0.46	0.00	0.96	0.78
Household Size: No. of Children	Girls > Boys	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.83	0.06	0.80	0.03	1.23	0.29	0.64	0.01	0.65	0.02	1.05	0.88	0.97	0.79	0.90	0.38	1.46	0.12
	Boys no girl	0.81	0.01	0.84	0.05	0.86	0.36	0.69	0.01	0.72	0.04	0.85	0.50	0.87	0.24	0.90	0.33	0.90	0.65
	Girls no boy	0.98	0.82	0.97	0.74	1.08	0.63	0.85	0.23	0.87	0.38	0.99	0.96	1.08	0.47	1.03	0.81	1.21	0.36
	Boys = Girls	0.92	0.21	0.94	0.39	0.92	0.58	0.81	0.07	0.86	0.24	0.82	0.36	0.98	0.83	0.97	0.77	1.02	0.93
	Boys > girls	1.09	0.17	1.13	0.09	0.93	0.59	1.12	0.30	1.14	0.30	0.98	0.93	1.06	0.48	1.11	0.22	0.88	0.45
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.83	0.02	0.81	0.02	0.91	0.60	0.86	0.23	0.80	0.16	0.74	0.30	0.79	0.01	0.79	0.03	0.98	1.00
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.33	0.01	0.18	0.00	0.43	0.01	0.47	0.54	0.11	0.05	0.40	0.08	0.29	0.00	0.19	0.00	0.50	0.01
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	0.97	0.84	0.98	0.86	1.06	0.90	0.96	0.86	0.88	0.57	2.42	0.18	1.02	0.90	1.04	0.77	0.93	0.87
	25-29 years	1.32	0.03	1.22	0.13	1.54	0.34	1.58	0.05	1.27	0.32	4.01	0.03	1.27	0.12	1.22	0.21	1.23	0.65
	30-34 years	1.41	0.01	1.34	0.04	1.43	0.45	1.62	0.05	1.31	0.28	4.22	0.03	1.38	0.06	1.39	0.06	1.01	0.98
	35-39 years	1.91	0.00	1.71	0.00	1.94	0.17	1.89	0.01	1.48	0.10	4.81	0.02	2.04	0.00	1.91	0.00	1.57	0.37
	40-44 years	2.45	0.00	2.03	0.00	2.41	0.06	2.38	0.00	2.01	0.01	4.20	0.03	2.70	0.00	2.13	0.00	2.43	0.07
	45-49 years	2.83	0.00	2.49	0.00	2.30	0.07	2.45	0.00	1.96	0.02	4.70	0.02	3.38	0.00	3.01	0.00	2.14	0.11

continue…

Appendix Table 8.3.5 (…continued): Determinants of Women Autonomy in Economic Decision-making (Traveling and recreation autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.37	0.00	1.32	0.00	1.30	0.07	1.09	0.47	1.21	0.15	0.88	0.60	1.54	0.00	1.36	0.01	1.59	0.01
	8-years education	1.21	0.10	1.20	0.15	1.20	0.41	0.92	0.57	1.02	0.92	0.83	0.52	1.53	0.02	1.29	0.14	1.68	0.10
	10-12years education	1.27	0.04	1.05	0.70	1.94	0.00	0.98	0.88	1.30	0.09	1.91	0.01	1.75	0.00	1.70	0.01	1.47	0.16
	Higher education	1.19	0.21	0.96	0.78	2.26	0.00	0.95	0.78	0.79	0.17	1.86	0.05	1.71	0.04	1.54	0.11	1.76	0.25
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.57	1.09	0.22	0.88	0.35	1.26	0.07	1.32	0.03	0.98	0.92	0.94	0.38	0.99	0.88	0.83	0.25
	8-years education	0.93	0.40	0.82	0.13	1.34	0.11	1.04	0.82	0.91	0.55	1.30	0.40	0.87	0.20	0.78	0.12	1.31	0.21
	10-12years education	1.04	0.60	0.98	0.84	1.13	0.44	1.14	0.34	1.14	0.33	0.99	0.96	0.98	0.82	0.89	0.28	1.23	0.27
	Higher education	1.08	0.43	1.10	0.32	0.91	0.63	1.13	0.43	1.12	0.43	0.97	0.92	1.11	0.40	1.17	0.22	0.81	0.42
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.15	0.02	1.22	0.00	0.83	0.11	1.05	0.60	1.12	0.23	0.81	0.34	1.18	0.02	1.25	0.00	0.86	0.25
	High income	1.44	0.02	1.62	0.01	0.80	0.36	1.34	0.13	1.48	0.07	0.87	0.63	1.57	0.05	1.97	0.02	0.59	0.28
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.92	0.22	0.91	0.24	0.96	0.76	0.92	0.57	0.94	0.68	0.91	0.76	0.89	0.18	0.89	0.21	0.93	0.69
	High income	1.88	0.09	1.21	0.02	1.13	0.35	1.00	0.99	0.95	0.72	1.15	0.57	1.79	0.02	1.32	0.01	1.04	0.78
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.63	0.00	1.00	0.99	0.13	0.00	0.52	0.00	0.81	0.17	0.20	0.00	0.74	0.03	1.16	0.34	0.07	0.00
	NWFP	0.93	0.55	1.43	0.01	0.25	0.00	0.71	0.07	1.05	0.81	0.32	0.00	1.03	0.83	1.57	0.01	0.24	0.00
	Baluchistan	0.19	0.00	0.25	0.00	0.26	0.00	0.20	0.00	0.30	0.00	0.11	0.00	0.19	0.00	0.24	0.00	0.31	0.02

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 1740.08; Prob > chi2 = 0.00; Log likelihood = -11195.63; Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 12.25; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=6.70, P > F = 0.00. Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 6.76; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 10.63, P>F=0.00. Pseudo R2 = 0.0721. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 586.62 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (62,513) = 9.52; Prob > F = 0.00*

Appendix Table 8.4.2: Determinants of Women Autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.19	0.10	1.13	0.32	1.11	0.37	1.65	0.00	1.62	0.00	1.24	0.23	0.98	0.86	0.98	0.88	0.99	0.93
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.73	0.00	0.61	0.00	0.81	0.07	0.74	0.02	0.59	0.00	0.84	0.34	0.72	0.00	0.60	0.00	0.78	0.10
	Above Average	0.54	0.00	0.44	0.00	0.84	0.08	0.60	0.00	0.40	0.00	0.65	0.00	0.49	0.00	0.45	0.00	0.96	0.76
Household Size: No. of children	No child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boy no girl	1.10	0.36	1.17	0.10	0.80	0.22	1.32	0.08	1.35	0.09	0.99	0.97	0.95	0.71	1.07	0.54	0.64	0.08
	Girl no boy	1.24	0.02	1.21	0.05	1.02	0.89	1.42	0.03	1.30	0.13	1.25	0.41	1.11	0.35	1.16	0.22	0.82	0.33
	Boys/Girls	1.28	0.01	1.32	0.00	0.90	0.50	1.70	0.00	1.63	0.00	1.14	0.57	1.04	0.70	1.17	0.12	0.68	0.05
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.91	0.09	0.86	0.09	1.16	0.29	0.92	0.46	0.79	0.08	0.74	0.06	0.88	0.06	0.88	0.07	1.06	0.75
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.14	0.00	0.83	0.03	0.49	0.56	0.12	0.05	0.38	0.08	0.32	0.00	0.18	0.00	0.47	0.00
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.06	0.64	1.04	0.73	1.13	0.72	1.01	0.96	0.93	0.75	1.33	0.56	1.15	0.34	1.12	0.43	1.16	0.72
	25-29 years	1.36	0.01	1.23	0.12	1.48	0.25	1.36	0.14	1.14	0.60	1.71	0.24	1.44	0.02	1.29	0.10	1.54	0.30
	30-34 years	1.48	0.00	1.36	0.03	1.42	0.32	1.53	0.05	1.17	0.53	2.05	0.12	1.52	0.01	1.49	0.02	1.18	0.70
	35-39 years	1.98	0.00	1.77	0.00	1.70	0.15	2.02	0.00	1.55	0.09	2.31	0.08	2.03	0.00	1.93	0.00	1.43	0.42
	40-44 years	2.74	0.00	2.11	0.00	2.29	0.02	2.72	0.00	2.02	0.01	2.55	0.04	2.82	0.00	2.20	0.00	2.21	0.06
	45-49 years	2.80	0.00	2.49	0.00	1.92	0.07	2.21	0.00	1.73	0.06	2.11	0.03	3.39	0.00	3.06	0.00	1.99	0.11

continue…

Appendix Table 8.4.2 (…continued): Determinants of Women Autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.30	0.00	1.18	0.05	1.32	0.02	1.08	0.51	1.15	0.29	0.96	0.79	1.38	0.00	1.17	0.17	1.50	0.02
	8-years education	1.25	0.06	1.18	0.23	1.23	0.26	0.97	0.85	1.03	0.89	0.91	0.70	1.42	0.07	1.20	0.31	1.49	0.17
	10-12years education	1.43	0.00	1.17	0.17	1.64	0.00	1.07	0.60	0.87	0.35	1.45	0.07	1.78	0.00	1.75	0.00	1.35	0.18
	Higher education	1.34	0.03	1.02	0.87	1.93	0.00	1.07	0.70	0.88	0.47	1.47	0.09	1.42	0.18	1.22	0.47	1.64	0.25
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.05	0.47	1.08	0.32	1.01	0.99	1.16	0.23	1.16	0.31	1.07	0.70	0.98	0.83	1.02	0.82	0.95	0.71
	8-years education	0.98	0.79	0.84	0.15	1.33	0.04	0.95	0.71	0.84	0.29	1.15	0.53	0.97	0.75	0.83	0.17	1.42	0.06
	10-12years education	1.01	0.85	0.90	0.23	1.24	0.09	1.04	0.79	1.02	0.90	1.03	0.89	0.98	0.82	0.81	0.16	1.42	0.04
	Higher education	1.03	0.76	1.06	0.52	0.95	0.75	1.00	1.00	1.04	0.81	0.93	0.72	1.09	0.50	1.14	0.32	0.93	0.74
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.21	0.00	1.27	0.00	0.95	0.59	1.09	0.36	1.20	0.07	0.87	0.35	1.23	0.01	1.25	0.00	1.00	0.97
	High income	1.50	0.01	1.51	0.02	1.08	0.70	1.33	0.14	1.19	0.44	1.22	0.39	1.65	0.02	2.29	0.01	0.61	0.24
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.97	0.63	0.95	0.49	1.01	0.95	1.01	0.95	1.04	0.78	0.96	0.85	0.93	0.35	0.92	0.35	0.96	0.77
	High income	0.97	0.66	0.92	0.29	1.10	0.42	1.15	0.23	1.14	0.29	1.06	0.74	0.82	0.04	0.82	0.17	0.95	0.70
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.73	0.00	1.14	0.21	0.36	0.00	0.77	0.06	0.99	0.97	0.62	0.01	0.65	0.00	1.22	0.16	0.10	0.00
	NWFP	0.88	0.22	1.66	0.00	0.20	0.00	0.67	0.03	1.17	0.50	0.26	0.00	0.95	0.68	1.83	0.00	0.18	0.00
	Baluchistan	0.20	0.00	0.30	0.00	0.18	0.00	0.23	0.00	0.38	0.00	0.12	0.00	0.18	0.00	0.27	0.00	0.20	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (29) = 1906.67; Prob > chi2 = 0.00; Log likelihood = -12078.233; Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 632.08 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (58, 1044) = 11.83; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(29, 499)=7.95, P > F = 0.00. Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 632.08 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(58, 470) = 75.12; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(29, 546) = 10.90, P>F=0.00. Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 632.08 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(58,517) = 9.46; Prob > F = 0.00*

Appendix Table 8.4.3: Determinants of Women Autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.19	0.09	1.14	0.31	1.10	0.38	1.66	0.00	1.63	0.00	1.24	0.23	0.98	0.86	0.98	0.88	0.98	0.92
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.74	0.00	0.61	0.00	0.81	0.07	0.74	0.02	0.60	0.00	0.85	0.35	0.72	0.00	0.60	0.00	0.78	0.10
	Above Average	0.55	0.00	0.45	0.00	0.83	0.07	0.61	0.00	0.41	0.00	0.65	0.00	0.50	0.00	0.45	0.00	0.96	0.78
Household Size: No. of children	No Child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boys no Girl	1.10	0.32	1.17	0.09	0.80	0.23	1.34	0.06	1.37	0.07	1.00	1.00	0.96	0.72	1.08	0.53	0.64	0.08
	Girls no boy	1.24	0.02	1.21	0.05	1.03	0.87	1.45	0.02	1.32	0.11	1.26	0.39	1.11	0.34	1.16	0.22	0.82	0.34
	Boys = Girls	1.21	0.04	1.26	0.02	0.86	0.38	1.50	0.01	1.45	0.04	1.08	0.76	1.02	0.84	1.15	0.22	0.67	0.06
	Girls > Boys	1.35	0.00	1.33	0.01	0.99	0.93	1.94	0.00	1.73	0.00	1.28	0.34	1.06	0.67	1.16	0.22	0.71	0.13
	Boys > Girls	1.35	0.00	1.42	0.00	0.89	0.48	1.90	0.00	1.86	0.00	1.12	0.65	1.06	0.60	1.22	0.08	0.66	0.06
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.91	0.09	0.86	0.09	1.16	0.29	0.92	0.46	0.79	0.08	0.74	0.06	0.88	0.06	0.88	0.07	1.06	0.75
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.14	0.00	0.82	0.04	0.47	0.54	0.11	0.05	0.40	0.08	0.33	0.00	0.18	0.00	0.47	0.00
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.06	0.64	1.04	0.73	1.13	0.72	1.01	0.98	0.92	0.73	1.33	0.56	1.15	0.34	1.12	0.43	1.16	0.72
	25-29 years	1.36	0.02	1.23	0.12	1.48	0.25	1.34	0.16	1.12	0.63	1.69	0.25	1.44	0.02	1.29	0.10	1.54	0.29
	30-34 years	1.47	0.00	1.35	0.04	1.42	0.32	1.49	0.07	1.14	0.60	2.03	0.13	1.52	0.01	1.48	0.02	1.18	0.70
	35-39 years	1.95	0.00	1.75	0.00	1.69	0.15	1.96	0.00	1.50	0.08	2.29	0.09	2.02	0.00	1.91	0.00	1.43	0.42
	40-44 years	2.68	0.00	2.08	0.00	2.27	0.02	2.60	0.00	1.94	0.01	2.50	0.05	2.80	0.00	2.18	0.00	2.21	0.07
	45-49 years	2.73	0.00	2.44	0.00	1.89	0.07	2.10	0.00	1.66	0.08	2.07	0.06	3.37	0.00	3.04	0.00	1.99	0.11

continue…

Appendix Table 8.4.3 (…continued): Determinants of Women Autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.31	0.00	1.19	0.05	1.33	0.02	1.09	0.44	1.16	0.26	0.96	0.82	1.38	0.00	1.17	0.17	1.50	0.02
	8-years education	1.26	0.06	1.18	0.22	1.24	0.26	0.98	0.92	1.04	0.83	0.92	0.72	1.42	0.07	1.20	0.31	1.49	0.17
	10-12years education	1.43	0.00	1.18	0.16	1.64	0.00	1.08	0.57	0.87	0.38	1.45	0.07	1.79	0.00	1.75	0.00	1.35	0.18
	Higher education	1.35	0.03	1.03	0.85	1.93	0.00	1.08	0.66	0.89	0.51	1.47	0.09	1.42	0.18	1.22	0.46	1.64	0.25
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.05	0.46	1.08	0.32	1.06	1.00	1.16	0.22	1.16	0.30	1.07	0.70	0.98	0.83	1.02	0.81	0.95	0.71
	8-years education	0.98	0.79	0.84	0.15	1.33	0.04	0.95	0.71	0.84	0.30	1.14	0.54	0.97	0.75	0.83	0.17	1.42	0.06
	10-12years education	1.02	0.84	0.90	0.23	1.24	0.09	1.05	0.73	1.03	0.86	1.02	0.90	0.98	0.82	0.81	0.16	1.42	0.04
	Higher education	1.03	0.74	1.06	0.52	0.96	0.76	1.01	0.97	1.04	0.79	0.93	0.72	1.09	0.49	1.14	0.32	0.93	0.74
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.21	0.00	1.27	0.00	0.95	0.56	1.08	0.43	1.19	0.09	0.86	0.32	1.23	0.01	1.25	0.00	1.00	0.99
	High income	1.49	0.01	1.50	0.02	1.07	0.73	1.30	0.18	1.17	0.50	1.21	0.40	1.65	0.03	2.29	0.01	0.60	0.23
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.97	0.67	0.95	0.50	1.01	0.92	1.01	0.95	1.04	0.80	0.97	0.87	0.93	0.36	0.92	0.36	0.96	0.78
	High income	0.97	0.70	0.92	0.31	1.10	0.38	1.16	0.20	1.15	0.28	1.07	0.70	0.82	0.04	0.82	0.17	0.95	0.72
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.73	0.00	1.14	0.21	0.36	0.00	0.77	0.07	1.00	0.99	0.61	0.01	0.65	0.00	1.22	0.17	0.10	0.00
	NWFP	0.88	0.22	1.66	0.00	0.19	0.00	0.67	0.03	1.18	0.49	0.26	0.00	0.95	0.68	1.83	0.00	0.18	0.00
	Baluchistan	0.20	0.00	0.30	0.00	0.18	0.00	0.23	0.00	0.38	0.00	0.12	0.00	0.18	0.00	0.27	0.00	0.20	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 1908.19; Prob > chi2 = 0.00; Log likelihood = -12077.474; Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 11.26; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=7.38, P > F = 0.00. Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 64.01; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 10.33, P>F=0.00. Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F (62,513) = 8.90; Prob > F = 0.00*

Appendix Table 8.4.4: Determinants of Women Autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.19	0.09	1.14	0.31	1.10	0.38	1.66	0.00	1.63	0.00	1.24	0.23	0.98	0.86	0.98	0.88	0.98	0.92
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.74	0.00	0.61	0.00	0.81	0.07	0.74	0.02	0.60	0.00	0.84	0.34	0.72	0.00	0.60	0.00	0.78	0.10
	Above Average	0.55	0.00	0.45	0.00	0.83	0.07	0.61	0.00	0.41	0.00	0.65	0.00	0.50	0.00	0.45	0.00	0.96	0.78
Household Size: No. of Children	Boys = Girls	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.83	0.04	0.80	0.02	1.16	0.38	0.67	0.01	0.69	0.04	1.28	0.46	0.98	0.84	0.87	0.22	1.49	0.06
	Boys no girl	0.92	0.27	0.93	0.44	0.93	0.60	0.89	0.31	0.95	0.70	1.04	0.87	0.93	0.54	0.94	0.55	0.96	0.86
	Girls no boy	1.03	0.71	0.97	0.71	1.19	0.23	0.96	0.77	0.91	0.53	1.20	0.54	1.09	0.45	1.01	0.94	1.22	0.31
	Girls > Boys	1.12	0.11	1.06	0.48	1.14	0.31	1.29	0.03	1.19	0.18	1.22	0.36	1.03	0.71	1.01	0.94	1.06	0.75
	Boys > Girls	1.12	0.10	1.13	0.12	1.03	0.83	1.26	0.04	1.28	0.07	1.20	0.48	1.04	0.63	1.06	0.51	0.99	0.93
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.91	0.09	0.86	0.09	1.16	0.29	0.92	0.46	0.79	0.08	0.74	0.06	0.88	0.06	0.88	0.07	1.06	0.75
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.14	0.00	0.82	0.04	0.47	0.54	0.11	0.05	0.40	0.08	0.33	0.00	0.18	0.00	0.47	0.00
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.06	0.64	1.04	0.73	1.13	0.72	1.01	0.98	0.92	0.73	2.42	0.18	1.15	0.34	1.12	0.43	1.16	0.72
	25-29 years	1.36	0.02	1.23	0.12	1.48	0.25	1.34	0.16	1.12	0.63	4.05	0.03	1.44	0.02	1.29	0.10	1.54	0.29
	30-34 years	1.47	0.00	1.35	0.04	1.42	0.32	1.49	0.07	1.14	0.60	4.32	0.16	1.52	0.01	1.48	0.02	1.18	0.70
	35-39 years	1.95	0.00	1.75	0.00	1.69	0.15	1.96	0.00	1.50	0.08	4.91	0.02	2.02	0.00	1.91	0.00	1.43	0.42
	40-44 years	2.68	0.00	2.08	0.00	2.27	0.02	2.60	0.00	1.94	0.01	4.35	0.03	2.80	0.00	2.18	0.00	2.21	0.07
	45-49 years	2.73	0.00	2.44	0.00	1.89	0.07	2.10	0.00	1.66	0.08	4.86	0.02	3.37	0.00	3.04	0.00	1.99	0.11

continue…

Appendix Table 8.4.4 (…continued): Determinants of Women Autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.31	0.00	1.19	0.05	1.33	0.02	1.09	0.44	1.16	0.26	0.87	0.57	1.38	0.00	1.17	0.17	1.50	0.02
	8-years education	1.26	0.06	1.18	0.22	1.24	0.26	0.98	0.92	1.04	0.83	0.81	0.47	1.42	0.07	1.20	0.31	1.49	0.17
	10-12years education	1.43	0.00	1.18	0.16	1.64	0.00	1.08	0.57	0.87	0.38	1.90	0.01	1.79	0.00	1.75	0.00	1.35	0.18
	Higher education	1.35	0.03	1.03	0.85	1.93	0.00	1.08	0.66	0.89	0.51	1.84	0.05	1.42	0.18	1.22	0.46	1.64	0.25
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.05	0.46	1.08	0.32	1.06	1.00	1.16	0.22	1.16	0.30	0.98	0.93	0.98	0.83	1.02	0.81	0.95	0.71
	8-years education	0.98	0.79	0.84	0.15	1.33	0.04	0.95	0.71	0.84	0.30	1.32	0.39	0.97	0.75	0.83	0.17	1.42	0.06
	10-12years education	1.02	0.84	0.90	0.23	1.24	0.09	1.05	0.73	1.03	0.86	0.99	0.97	0.98	0.82	0.81	0.16	1.42	0.04
	Higher education	1.03	0.74	1.06	0.52	0.96	0.76	1.01	0.97	1.04	0.79	0.97	0.93	1.09	0.49	1.14	0.32	0.93	0.74
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.21	0.00	1.27	0.00	0.95	0.56	1.08	0.43	1.19	0.09	0.82	0.36	1.23	0.01	1.25	0.00	1.00	0.99
	High income	1.49	0.01	1.50	0.02	1.07	0.73	1.30	0.18	1.17	0.50	0.88	0.68	1.65	0.03	2.29	0.01	0.60	0.23
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.97	0.67	0.95	0.50	1.01	0.92	1.01	0.95	1.04	0.80	0.91	0.75	0.93	0.36	0.92	0.36	0.96	0.78
	High income	0.97	0.70	0.92	0.31	1.10	0.38	1.16	0.20	1.15	0.28	1.15	0.59	0.82	0.04	0.82	0.17	0.95	0.72
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.73	0.00	1.14	0.21	0.36	0.00	0.77	0.07	1.00	0.99	0.20	0.00	0.65	0.00	1.22	0.17	0.10	0.00
	NWFP	0.88	0.22	1.66	0.00	0.19	0.00	0.67	0.03	1.18	0.49	0.32	0.00	0.95	0.68	1.83	0.00	0.18	0.00
	Baluchistan	0.20	0.00	0.30	0.00	0.18	0.00	0.23	0.00	0.38	0.00	0.11	0.00	0.18	0.00	0.27	0.00	0.20	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 1908.19; Prob > chi2 = 0.00; Log likelihood = -12077.47; Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 11.26; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=7.38, P > F = 0.00. Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df = 527; F(62, 466) = 64.01; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 10.33, P>F=0.00. Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(62,513) = 8.90; Prob > F = 0.00*

Appendix Table 8.4.5: Determinants of Women Autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.19	0.09	1.14	0.31	1.10	0.38	1.66	0.00	1.63	0.00	1.24	0.23	0.98	0.86	0.98	0.88	0.98	0.92
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.74	0.00	0.61	0.00	0.81	0.07	0.74	0.02	0.60	0.00	0.85	0.35	0.72	0.00	0.60	0.00	0.78	0.10
	Above Average	0.55	0.00	0.45	0.00	0.83	0.07	0.61	0.00	0.41	0.00	0.65	0.00	0.50	0.00	0.45	0.00	0.96	0.78
Household Size: No. of Children	Girls > Boys	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.74	0.00	0.75	0.01	1.01	0.93	0.52	0.00	0.58	0.00	0.78	0.34	0.95	0.67	0.86	0.22	1.40	0.13
	Boys no girl	0.82	0.02	0.88	0.18	0.81	0.12	0.69	0.00	0.79	0.16	0.78	0.17	0.91	0.38	0.93	0.50	0.91	0.62
	Girls no boy	0.92	0.36	0.91	0.36	1.04	0.76	0.75	0.03	0.76	0.10	0.99	0.94	1.06	0.63	1.00	1.00	1.15	0.48
	Boys = Girls	0.90	0.11	0.95	0.48	0.88	0.31	0.78	0.03	0.84	0.18	0.84	0.31	0.97	0.71	0.99	0.94	0.94	0.75
	Boys > girls	1.00	0.94	1.07	0.39	0.90	0.32	0.98	0.83	1.07	0.60	0.87	0.40	1.01	0.91	1.05	0.55	0.93	0.60
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	0.91	0.09	0.86	0.09	1.16	0.29	0.92	0.46	0.79	0.08	0.74	0.06	0.88	0.06	0.88	0.07	1.06	0.75
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.23	0.00	0.14	0.00	0.82	0.04	0.47	0.54	0.11	0.05	0.40	0.08	0.33	0.00	0.18	0.00	0.47	0.00
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.06	0.64	1.04	0.73	1.13	0.72	1.01	0.98	0.92	0.73	1.33	0.56	1.15	0.34	1.12	0.43	1.16	0.72
	25-29 years	1.36	0.02	1.23	0.12	1.48	0.25	1.34	0.16	1.12	0.63	1.69	0.25	1.44	0.02	1.29	0.10	1.54	0.29
	30-34 years	1.47	0.00	1.35	0.04	1.42	0.32	1.49	0.07	1.14	0.60	2.03	0.13	1.52	0.01	1.48	0.02	1.18	0.70
	35-39 years	1.95	0.00	1.75	0.00	1.69	0.15	1.96	0.00	1.50	0.08	2.29	0.09	2.02	0.00	1.91	0.00	1.43	0.42
	40-44 years	2.68	0.00	2.08	0.00	2.27	0.02	2.60	0.00	1.94	0.01	2.50	0.05	2.80	0.00	2.18	0.00	2.21	0.07
	45-49 years	2.73	0.00	2.44	0.00	1.89	0.07	2.10	0.00	1.66	0.08	2.07	0.06	3.37	0.00	3.04	0.00	1.99	0.11

continue…

Appendix Table 8.4.5 (…continued): Determinants of Women Autonomy in Economic Decision-making (Medical treatment autonomy)

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.31	0.00	1.19	0.05	1.33	0.02	1.09	0.44	1.16	0.26	0.96	0.82	1.38	0.00	1.17	0.17	1.50	0.02
	8-years education	1.26	0.06	1.18	0.22	1.24	0.26	0.98	0.92	1.04	0.83	0.92	0.72	1.42	0.07	1.20	0.31	1.49	0.17
	10-12years education	1.43	0.00	1.18	0.16	1.64	0.00	1.08	0.57	0.87	0.38	1.45	0.07	1.79	0.00	1.75	0.00	1.35	0.18
	Higher education	1.35	0.03	1.03	0.85	1.93	0.00	1.08	0.66	0.89	0.51	1.47	0.09	1.42	0.18	1.22	0.46	1.64	0.25
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.05	0.46	1.08	0.32	1.06	1.00	1.16	0.22	1.16	0.30	1.07	0.70	0.98	0.83	1.02	0.81	0.95	0.71
	8-years education	0.98	0.79	0.84	0.15	1.33	0.04	0.95	0.71	0.84	0.30	1.14	0.54	0.97	0.75	0.83	0.17	1.42	0.06
	10-12years education	1.02	0.84	0.90	0.23	1.24	0.09	1.05	0.73	1.03	0.86	1.02	0.90	0.98	0.82	0.81	0.16	1.42	0.04
	Higher education	1.03	0.74	1.06	0.52	0.96	0.76	1.01	0.97	1.04	0.79	0.93	0.72	1.09	0.49	1.14	0.32	0.93	0.74
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.21	0.00	1.27	0.00	0.95	0.56	1.08	0.43	1.19	0.09	0.86	0.32	1.23	0.01	1.25	0.00	1.00	0.99
	High income	1.49	0.01	1.50	0.02	1.07	0.73	1.30	0.18	1.17	0.50	1.21	0.40	1.65	0.03	2.29	0.01	0.60	0.23
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	0.97	0.67	0.95	0.50	1.01	0.92	1.01	0.95	1.04	0.80	0.97	0.87	0.93	0.36	0.92	0.36	0.96	0.78
	High income	0.97	0.70	0.92	0.31	1.10	0.38	1.16	0.20	1.15	0.28	1.07	0.70	0.82	0.04	0.82	0.17	0.95	0.72
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	0.73	0.00	1.14	0.21	0.36	0.00	0.77	0.07	1.00	0.99	0.61	0.01	0.65	0.00	1.22	0.17	0.10	0.00
	NWFP	0.88	0.22	1.66	0.00	0.19	0.00	0.67	0.03	1.18	0.49	0.26	0.00	0.95	0.68	1.83	0.00	0.18	0.00
	Baluchistan	0.20	0.00	0.30	0.00	0.18	0.00	0.23	0.00	0.38	0.00	0.12	0.00	0.18	0.00	0.27	0.00	0.20	0.00

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; LR chi2 (31) = 1908.19; Prob > chi2 = 0.00; Log likelihood = -12077.474; Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; Number of obs = 13522; Design df = 1101; F (62, 1040) = 11.26; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318; Design df=527; F(31, 497)=7.38, P > F = 0.00. Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of Obs = 5318;; Design df = 527; F(62, 466) = 64.01; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574, F(31, 544) = 10.33, P>F=0.00. Pseudo R2 = 0.0732. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 636.36 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of Obs = 8204; Design df = 574; F(62,513) = 8.90; Prob > F = 0.00*

APPENDIX-IV: Determinants of Women Autonomy in Family Planning Decision-making

Appendix Table 9.1.2: Determinants of Women Autonomy in Family Planning Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.06	1.38	0.02	0.80	0.33	1.09	0.62	1.14	0.49	0.94	0.88	1.29	0.08	1.47	0.02	0.72	0.22
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.86	0.09	0.90	0.24	0.78	0.19	0.78	0.10	0.77	0.10	0.84	0.56	0.88	0.22	0.93	0.52	0.75	0.21
	Above Average	0.86	0.05	0.95	0.56	0.60	0.00	0.75	0.02	0.80	0.11	0.63	0.08	0.88	0.19	1.00	0.99	0.56	0.01
Household Size: No. of children	No child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boy no girl	1.47	0.00	1.51	0.00	1.16	0.57	1.62	0.01	1.62	0.01	1.44	0.43	1.43	0.01	1.47	0.00	1.03	0.91
	Girl no boy	1.48	0.00	1.46	0.00	1.28	0.33	1.48	0.05	1.39	0.11	1.58	0.34	1.50	0.00	1.51	0.00	1.14	0.64
	Boys/Girls (both)	1.52	0.00	1.63	0.00	0.98	0.94	1.69	0.00	1.91	0.00	1.02	0.97	1.47	0.00	1.54	0.00	0.98	0.94
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.19	0.04	1.17	0.10	1.18	0.37	1.05	0.70	0.99	0.97	1.34	0.36	1.26	0.04	1.25	0.06	1.09	0.71
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.01	0.99	0.96	0.90	1.28	0.71	4.54	0.33	1.71	0.65	3.91	0.24	0.75	0.38	0.79	0.51	0.74	0.61
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.26	0.08	1.26	0.08	0.96	0.87	0.89	0.68	0.91	0.73	0.67	0.41	1.38	0.03	1.40	0.03	1.05	0.86
	25-29 years	1.33	0.03	1.40	0.01	0.81	0.40	1.10	0.75	1.15	0.64	0.68	0.34	1.40	0.02	1.51	0.01	0.81	0.49
	30-34 years	1.14	0.34	1.25	0.13	0.61	0.07	1.14	0.66	1.33	0.35	0.48	0.13	1.11	0.52	1.23	0.22	0.62	0.14
	35-39 years	1.27	0.09	1.38	0.04	0.71	0.22	1.27	0.48	1.33	0.42	0.75	0.57	1.23	0.18	1.39	0.06	0.61	0.10
	40-44 years	1.21	0.23	1.24	0.19	0.84	0.53	1.02	0.95	1.00	0.99	0.82	0.70	1.28	0.18	1.37	0.11	0.76	0.40
	45-49 years	1.16	0.35	1.16	0.38	0.93	0.83	1.04	0.91	0.97	0.94	0.88	0.85	1.19	0.35	1.26	0.24	0.80	0.53

continue…

Appendix Table 9.1.2 (…continued): Determinants of Women Autonomy in Family Planning Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.08	0.40	1.18	0.11	0.71	0.11	1.17	0.31	1.15	0.35	1.08	0.80	1.04	0.76	1.21	0.18	0.48	0.12
	8-years education	1.34	0.01	1.57	0.00	0.72	0.30	1.52	0.02	1.71	0.01	0.94	0.87	1.12	0.46	1.35	0.15	0.38	0.16
	10-12yrs education	1.31	0.01	1.59	0.00	0.63	0.18	1.32	0.08	1.58	0.01	0.61	0.19	1.36	0.06	1.58	0.05	0.76	0.51
	Higher education	1.68	0.00	2.23	0.00	1.04	0.93	1.68	0.01	2.00	0.00	0.98	0.97	1.94	0.00	3.25	0.01	1.31	0.75
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.25	0.01	1.23	0.02	1.12	0.50	1.07	0.69	1.14	0.43	0.85	0.57	1.25	0.02	1.21	0.06	1.22	0.32
	8-years education	1.12	0.22	1.17	0.12	0.82	0.30	0.91	0.61	0.92	0.64	0.92	0.77	1.18	0.11	1.28	0.05	0.74	0.21
	10-12yrs education	1.23	0.02	1.36	0.00	0.71	0.05	1.06	0.72	1.15	0.45	0.76	0.37	1.25	0.03	1.42	0.00	0.63	0.03
	Higher education	1.25	0.03	1.57	0.00	0.53	0.02	1.20	0.31	1.52	0.04	0.60	0.19	1.14	0.29	1.41	0.03	0.43	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.06	1.11	0.13	1.13	0.36	0.87	0.19	0.91	0.38	0.82	0.35	1.26	0.00	1.21	0.03	1.40	0.05
	High income	1.12	0.41	1.34	0.20	0.58	0.22	1.03	0.85	1.64	0.11	0.39	0.08	0.89	0.67	0.84	0.63	0.88	0.87
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.04	0.63	1.07	0.44	0.89	0.53	1.22	0.25	1.14	0.43	1.30	0.40	1.00	0.99	1.06	0.57	0.77	0.24
	High income	1.20	0.02	1.35	0.00	0.69	0.02	1.34	0.04	1.44	0.02	0.95	0.85	1.17	0.08	1.34	0.01	0.60	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.24	0.04	1.22	0.10	1.20	0.34	0.84	0.29	0.79	0.19	1.12	0.70	1.56	0.00	1.55	0.00	1.21	0.45
	NWFP	1.51	0.00	1.92	0.00	0.57	0.01	1.68	0.01	2.70	0.01	0.55	0.08	1.54	0.00	1.92	0.00	0.58	0.02
	Baluchistan	0.09	0.00	0.09	0.00	1.57	0.19	0.13	0.00	0.09	0.00	5.49	0.00	0.09	0.00	0.09	0.00	0.38	0.07

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (29) = 2534.61; Prob > chi2 = 0.0000; Log likelihood = -8777.20; Pseudo R2 = 0.1262. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 441.57 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (58, 1044) = 5.90; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Subpop. No. of obs = 5252; Design df=527; F(29, 499)=4.92, P > F = 0.00. Pseudo R2 = 0.1262. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 441.57 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Subpop. No. of obs = 5252; Design df = 527; F(58, 470) = 4.27; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. no. of obs = 8096; Design df = 574, F(29, 546) =5.14, P>F=0.00. Pseudo R2 = 0.1262. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 441.57 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (58, 517) = 4.55; Prob > F = 0.00*

Appendix Table 9.1.3: Determinants of Women Autonomy in Family Planning Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.06	1.38	0.02	0.80	0.32	1.09	0.64	1.14	0.49	0.94	0.88	1.29	0.08	1.48	0.02	0.72	0.22
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.10	0.90	0.25	0.79	0.21	0.77	0.09	0.76	0.09	0.82	0.53	0.88	0.25	0.94	0.55	0.76	0.24
	Above Average	0.87	0.07	0.96	0.61	0.62	0.00	0.76	0.03	0.80	0.11	0.64	0.08	0.89	0.23	1.00	0.97	0.57	0.01
Household Size: No. of children	No Child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boys no Girl	1.48	0.00	1.51	0.00	1.17	0.53	1.64	0.01	1.63	0.01	1.46	0.41	1.44	0.01	1.47	0.00	1.05	0.87
	Girls no boy	1.49	0.00	1.46	0.00	1.29	0.30	1.49	0.04	1.40	0.10	1.60	0.32	1.51	0.00	1.52	0.00	1.16	0.61
	Boys = Girls	1.43	0.00	1.57	0.00	0.83	0.50	1.61	0.01	1.84	0.00	0.88	0.82	1.38	0.01	1.48	0.01	0.82	0.51
	Girls > Boys	1.65	0.00	1.67	0.00	1.26	0.39	2.02	0.00	2.11	0.00	1.39	0.52	1.55	0.00	1.56	0.00	1.21	0.51
	Boys > Girls	1.55	0.00	1.68	0.00	0.96	0.87	1.59	0.01	1.85	0.00	0.91	0.85	1.54	0.00	1.62	0.00	1.02	0.95
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.16	0.08	1.15	0.14	1.11	0.58	1.03	0.84	0.98	0.92	1.28	0.43	1.22	0.07	1.23	0.08	1.01	0.95
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.01	0.99	0.96	0.91	1.27	0.71	4.26	0.34	1.66	0.67	3.42	0.29	0.76	0.39	0.79	0.51	0.75	0.63
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.26	0.08	1.26	0.08	0.96	0.87	0.89	0.68	0.91	0.73	0.68	0.41	1.38	0.03	1.40	0.03	1.05	0.87
	25-29 years	1.33	0.03	1.40	0.02	0.81	0.38	1.09	0.77	1.14	0.65	0.67	0.33	1.39	0.03	1.51	0.01	0.81	0.48
	30-34 years	1.13	0.38	1.24	0.14	0.60	0.06	1.13	0.68	1.32	0.36	0.47	0.12	1.10	0.56	1.22	0.23	0.61	0.12
	35-39 years	1.26	0.11	1.36	0.05	0.70	0.19	1.27	0.49	1.32	0.43	0.74	0.55	1.22	0.22	1.38	0.07	0.59	0.10
	40-44 years	1.18	0.29	1.23	0.22	0.80	0.43	1.00	1.00	0.98	0.96	0.78	0.64	1.25	0.22	1.36	0.12	0.72	0.33
	45-49 years	1.14	0.43	1.14	0.42	0.89	0.72	1.02	0.97	0.96	0.91	0.84	0.79	1.16	0.43	1.24	0.28	0.76	0.44

continue…

Appendix Table 9.1.3 (…continued): Determinants of Women Autonomy in Family Planning Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.09	0.37	1.19	0.11	0.72	0.11	1.18	0.28	1.16	0.34	1.08	0.78	1.04	0.73	1.21	0.17	0.48	0.12
	8-years education	1.34	0.01	1.57	0.00	0.72	0.31	1.53	0.02	1.72	0.01	0.94	0.88	1.12	0.47	1.34	0.15	0.38	0.16
	10-12years education	1.31	0.01	1.60	0.00	0.63	0.18	1.32	0.08	1.58	0.01	0.60	0.18	1.36	0.06	1.59	0.04	0.77	0.54
	Higher education	1.68	0.00	2.24	0.00	1.04	0.93	1.68	0.01	2.00	0.00	0.98	0.97	1.94	0.00	3.26	0.01	1.31	0.76
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.25	0.01	1.23	0.01	1.12	0.50	1.07	0.68	1.14	0.43	0.84	0.56	1.25	0.02	1.21	0.05	1.22	0.32
	8-years education	1.12	0.23	1.17	0.12	0.82	0.30	0.91	0.60	0.92	0.63	0.91	0.76	1.18	0.11	1.28	0.05	0.74	0.21
	10-12years education	1.23	0.02	1.36	0.00	0.71	0.05	1.06	0.72	1.15	0.45	0.77	0.37	1.25	0.03	1.42	0.00	0.63	0.03
	Higher education	1.25	0.03	1.57	0.00	0.53	0.02	1.20	0.30	1.52	0.04	0.60	0.18	1.14	0.28	1.41	0.03	0.43	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.07	1.11	0.13	1.12	0.41	0.87	0.17	0.90	0.36	0.80	0.32	1.25	0.00	1.21	0.03	1.38	0.06
	High income	1.11	0.44	1.33	0.21	0.57	0.20	1.03	0.87	1.63	0.11	0.38	0.08	0.88	0.65	0.84	0.63	0.84	0.83
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.05	0.60	1.07	0.43	0.90	0.57	1.22	0.24	1.14	0.42	1.32	0.36	1.01	0.95	1.06	0.55	0.78	0.26
	High income	1.21	0.02	1.36	0.00	0.70	0.03	1.35	0.04	1.45	0.02	0.97	0.91	1.18	0.07	1.35	0.01	0.61	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.24	0.04	1.22	0.10	1.20	0.34	0.84	0.27	0.78	0.19	1.11	0.73	1.56	0.00	1.55	0.00	1.21	0.44
	NWFP	1.51	0.00	1.92	0.00	0.57	0.01	1.66	0.01	2.69	0.01	0.53	0.07	1.54	0.00	1.92	0.00	0.58	0.02
	Baluchistan	0.09	0.00	0.09	0.00	1.60	0.18	0.13	0.00	0.09	0.00	5.46	0.00	0.09	0.00	0.09	0.00	0.38	0.07

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (31) = 2537.31; Prob > chi2 = 0.0000; Log likelihood = -8775.84; Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (62, 1040) = 5.68; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Subpop. No. of obs = 5252; Design df=527; F(31, 497) = 4.63, P > F = 0.00. Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 4.41; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 5.07, P>F=0.00. Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (62, 513) = 4.60; Prob > F = 0.00.*

Appendix Table 9.1.4: Determinants of Women Autonomy in Family Planning Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.06	1.38	0.02	0.80	0.32	1.09	0.64	1.14	0.49	0.94	0.88	1.29	0.08	1.48	0.02	0.72	0.22
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.10	0.90	0.25	0.79	0.21	0.77	0.09	0.76	0.09	0.82	0.53	0.88	0.25	0.94	0.55	0.76	0.24
	Above Average	0.87	0.07	0.96	0.61	0.62	0.00	0.76	0.03	0.80	0.11	0.64	0.08	0.89	0.23	1.00	0.97	0.57	0.01
Household Size: No. of Children	Boys/Girls (both)	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.70	0.00	0.64	0.00	1.20	0.50	0.62	0.01	0.54	0.00	1.13	0.82	0.73	0.01	0.68	0.01	1.22	0.51
	Boys no girl	1.04	0.67	0.96	0.71	1.41	0.09	1.02	0.90	0.89	0.47	1.66	0.20	1.04	0.70	1.00	0.97	1.28	0.29
	Girls no boy	1.04	0.68	0.93	0.48	1.55	0.05	0.93	0.65	0.76	0.12	1.81	0.15	1.10	0.42	1.03	0.83	1.41	0.19
	Girls > Boys	1.16	0.09	1.07	0.51	1.51	0.02	1.26	0.13	1.14	0.43	1.57	0.17	1.13	0.24	1.05	0.67	1.47	0.07
	Boys > Girls	1.08	0.31	1.07	0.45	1.15	0.45	0.99	0.95	1.00	0.98	1.03	0.93	1.12	0.26	1.09	0.44	1.24	0.34
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.16	0.08	1.15	0.14	1.11	0.58	1.03	0.84	0.98	0.92	1.28	0.43	1.22	0.07	1.23	0.08	1.01	0.95
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.01	0.99	0.96	0.91	1.27	0.71	4.26	0.34	1.66	0.67	3.42	0.29	0.76	0.39	0.79	0.51	0.75	0.63
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.26	0.08	1.26	0.08	0.96	0.87	0.89	0.68	0.91	0.73	0.68	0.41	1.38	0.03	1.40	0.03	1.05	0.87
	25-29 years	1.33	0.03	1.40	0.02	0.81	0.38	1.09	0.77	1.14	0.65	0.67	0.33	1.39	0.03	1.51	0.01	0.81	0.48
	30-34 years	1.13	0.38	1.24	0.14	0.60	0.06	1.13	0.68	1.32	0.36	0.47	0.12	1.10	0.56	1.22	0.23	0.61	0.12
	35-39 years	1.26	0.11	1.36	0.05	0.70	0.19	1.27	0.49	1.32	0.43	0.74	0.55	1.22	0.22	1.38	0.07	0.59	0.10
	40-44 years	1.18	0.29	1.23	0.22	0.80	0.43	1.00	1.00	0.98	0.96	0.78	0.64	1.25	0.22	1.36	0.12	0.72	0.33
	45-49 years	1.14	0.43	1.14	0.42	0.89	0.72	1.02	0.97	0.96	0.91	0.84	0.79	1.16	0.43	1.24	0.28	0.76	0.44

continue…

Appendix Table 9.1.4 (…continued): Determinants of Women Autonomy in Family Planning Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.09	0.37	1.19	0.11	0.72	0.11	1.18	0.28	1.16	0.34	1.08	0.78	1.04	0.73	1.21	0.17	0.48	0.12
	8-years education	1.34	0.01	1.57	0.00	0.72	0.31	1.53	0.02	1.72	0.01	0.94	0.88	1.12	0.47	1.34	0.15	0.38	0.16
	10-12years education	1.31	0.01	1.60	0.00	0.63	0.18	1.32	0.08	1.58	0.01	0.60	0.18	1.36	0.06	1.59	0.04	0.77	0.54
	Higher education	1.68	0.00	2.24	0.00	1.04	0.93	1.68	0.01	2.00	0.00	0.98	0.97	1.94	0.00	3.26	0.01	1.31	0.76
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.25	0.01	1.23	0.01	1.12	0.50	1.07	0.68	1.14	0.43	0.84	0.56	1.25	0.02	1.21	0.05	1.22	0.32
	8-years education	1.12	0.23	1.17	0.12	0.82	0.30	0.91	0.60	0.92	0.63	0.91	0.76	1.18	0.11	1.28	0.05	0.74	0.21
	10-12years education	1.23	0.02	1.36	0.00	0.71	0.05	1.06	0.72	1.15	0.45	0.77	0.37	1.25	0.03	1.42	0.00	0.63	0.03
	Higher education	1.25	0.03	1.57	0.00	0.53	0.02	1.20	0.30	1.52	0.04	0.60	0.18	1.14	0.28	1.41	0.03	0.43	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.07	1.11	0.13	1.12	0.41	0.87	0.17	0.90	0.36	0.80	0.32	1.25	0.00	1.21	0.03	1.38	0.06
	High income	1.11	0.44	1.33	0.21	0.57	0.20	1.03	0.87	1.63	0.11	0.38	0.08	0.88	0.65	0.84	0.63	0.84	0.83
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.05	0.60	1.07	0.43	0.90	0.57	1.22	0.24	1.14	0.42	1.32	0.36	1.01	0.95	1.06	0.55	0.78	0.26
	High income	1.21	0.02	1.36	0.00	0.70	0.03	1.35	0.04	1.45	0.02	0.97	0.91	1.18	0.07	1.35	0.01	0.61	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.24	0.04	1.22	0.10	1.20	0.34	0.84	0.27	0.78	0.19	1.11	0.73	1.56	0.00	1.55	0.00	1.21	0.44
	NWFP	1.51	0.00	1.92	0.00	0.57	0.01	1.66	0.01	2.69	0.01	0.53	0.07	1.54	0.00	1.92	0.00	0.58	0.02
	Baluchistan	0.09	0.00	0.09	0.00	1.60	0.18	0.13	0.00	0.09	0.00	5.46	0.00	0.09	0.00	0.09	0.00	0.38	0.07

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (31) = 2537.31; Prob > chi2 = 0.0000; Log likelihood = -8775.85; Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (62, 1040) = 5.68; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(31, 497)=4.63, P > F = 0.00. Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 4.41; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 5.07, P>F=0.00. Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (62, 513) = 4.60; Prob > F = 0.00*

Appendix Table 9.1.5: Determinants of Women Autonomy in Family Planning Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.06	1.38	0.02	0.80	0.32	1.09	0.64	1.14	0.49	0.94	0.88	1.29	0.08	1.48	0.02	0.72	0.22
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.10	0.90	0.25	0.79	0.21	0.77	0.09	0.76	0.09	0.82	0.53	0.88	0.25	0.94	0.55	0.76	0.24
	Above Average	0.87	0.07	0.96	0.61	0.62	0.00	0.76	0.03	0.80	0.11	0.64	0.08	0.89	0.23	1.00	0.97	0.57	0.01
Household Size: No. of Children	Girls > Boys	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.60	0.00	0.60	0.00	0.80	0.39	0.50	0.00	0.47	0.00	0.72	0.52	0.64	0.00	0.64	0.00	0.83	0.51
	Boys no girl	0.90	0.28	0.90	0.35	0.93	0.73	0.81	0.24	0.78	0.22	1.05	0.87	0.92	0.52	0.95	0.67	0.87	0.56
	Girls no boy	0.90	0.31	0.87	0.24	1.03	0.89	0.74	0.09	0.66	0.05	1.15	0.71	0.97	0.82	0.98	0.86	0.96	0.86
	Boys = Girls	0.86	0.09	0.94	0.51	0.66	0.02	0.80	0.13	0.87	0.43	0.64	0.17	0.89	0.24	0.95	0.67	0.68	0.07
	Boys > girls	0.94	0.39	1.01	0.93	0.76	0.07	0.79	0.07	0.88	0.39	0.65	0.11	0.99	0.93	1.04	0.70	0.84	0.35
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.16	0.08	1.15	0.14	1.11	0.58	1.03	0.84	0.98	0.92	1.28	0.43	1.22	0.07	1.23	0.08	1.01	0.95
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.01	0.99	0.96	0.91	1.27	0.71	4.26	0.34	1.66	0.67	3.42	0.29	0.76	0.39	0.79	0.51	0.75	0.63
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.26	0.08	1.26	0.08	0.96	0.87	0.89	0.68	0.91	0.73	0.68	0.41	1.38	0.03	1.40	0.03	1.05	0.87
	25-29 years	1.33	0.03	1.40	0.02	0.81	0.38	1.09	0.77	1.14	0.65	0.67	0.33	1.39	0.03	1.51	0.01	0.81	0.48
	30-34 years	1.13	0.38	1.24	0.14	0.60	0.06	1.13	0.68	1.32	0.36	0.47	0.12	1.10	0.56	1.22	0.23	0.61	0.12
	35-39 years	1.26	0.11	1.36	0.05	0.70	0.19	1.27	0.49	1.32	0.43	0.74	0.55	1.22	0.22	1.38	0.07	0.59	0.10
	40-44 years	1.18	0.29	1.23	0.22	0.80	0.43	1.00	1.00	0.98	0.96	0.78	0.64	1.25	0.22	1.36	0.12	0.72	0.33
	45-49 years	1.14	0.43	1.14	0.42	0.89	0.72	1.02	0.97	0.96	0.91	0.84	0.79	1.16	0.43	1.24	0.28	0.76	0.44

continue…

Appendix Table 9.1.5(…continued): Determinants of Women Autonomy in Family Planning Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.09	0.37	1.19	0.11	0.72	0.11	1.18	0.28	1.16	0.34	1.08	0.78	1.04	0.73	1.21	0.17	0.48	0.12
	8-years education	1.34	0.01	1.57	0.00	0.72	0.31	1.53	0.02	1.72	0.01	0.94	0.88	1.12	0.47	1.34	0.15	0.38	0.16
	10-12years education	1.31	0.01	1.60	0.00	0.63	0.18	1.32	0.08	1.58	0.01	0.60	0.18	1.36	0.06	1.59	0.04	0.77	0.54
	Higher education	1.68	0.00	2.24	0.00	1.04	0.93	1.68	0.01	2.00	0.00	0.98	0.97	1.94	0.00	3.26	0.01	1.31	0.76
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.25	0.01	1.23	0.01	1.12	0.50	1.07	0.68	1.14	0.43	0.84	0.56	1.25	0.02	1.21	0.05	1.22	0.32
	8-years education	1.12	0.23	1.17	0.12	0.82	0.30	0.91	0.60	0.92	0.63	0.91	0.76	1.18	0.11	1.28	0.05	0.74	0.21
	10-12years education	1.23	0.02	1.36	0.00	0.71	0.05	1.06	0.72	1.15	0.45	0.77	0.37	1.25	0.03	1.42	0.00	0.63	0.03
	Higher education	1.25	0.03	1.57	0.00	0.53	0.02	1.20	0.30	1.52	0.04	0.60	0.18	1.14	0.28	1.41	0.03	0.43	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.07	1.11	0.13	1.12	0.41	0.87	0.17	0.90	0.36	0.80	0.32	1.25	0.00	1.21	0.03	1.38	0.06
	High income	1.11	0.44	1.33	0.21	0.57	0.20	1.03	0.87	1.63	0.11	0.38	0.08	0.88	0.65	0.84	0.63	0.84	0.83
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.05	0.60	1.07	0.43	0.90	0.57	1.22	0.24	1.14	0.42	1.32	0.36	1.01	0.95	1.06	0.55	0.78	0.26
	High income	1.21	0.02	1.36	0.00	0.70	0.03	1.35	0.04	1.45	0.02	0.97	0.91	1.18	0.07	1.35	0.01	0.61	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.24	0.04	1.22	0.10	1.20	0.34	0.84	0.27	0.78	0.19	1.11	0.73	1.56	0.00	1.55	0.00	1.21	0.44
	NWFP	1.51	0.00	1.92	0.00	0.57	0.01	1.66	0.01	2.69	0.01	0.53	0.07	1.54	0.00	1.92	0.00	0.58	0.02
	Baluchistan	0.09	0.00	0.09	0.00	1.60	0.18	0.13	0.00	0.09	0.00	5.46	0.00	0.09	0.00	0.09	0.00	0.38	0.07

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348;LR chi2 (31) = 2537.31; Prob > chi2 = 0.00; Log likelihood = -8775.84; Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; Design df = 1101; F (62, 1042) = 5.68; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(31, 497)=4.63, P > F = 0.00. Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Population size = 5389649.7; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 4.41; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 5.07, P>F=0.00. Pseudo R2 = 0.1263. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 447.53 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (31, 544) = 5.07; Prob > F = 0.00*

APPENDIX-V: ***Determinants of Women Autonomy in Family Planning Decision-making: Disaggregated Analysis***

Table 10.1.2: Determinants of Women Autonomy in Family Planning (more children) Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.04	1.36	0.02	0.75	0.24	1.21	0.23	1.27	0.16	0.93	0.86	1.25	0.10	1.40	0.04	0.66	0.14
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.88	0.13	0.92	0.32	0.78	0.18	0.84	0.21	0.85	0.27	0.84	0.57	0.90	0.28	0.95	0.63	0.73	0.18
	Above Average	0.81	0.00	0.88	0.09	0.61	0.00	0.73	0.00	0.75	0.02	0.66	0.10	0.84	0.06	0.93	0.46	0.55	0.00
Household Size: No. of children	No child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boy no girl	1.46	0.00	1.49	0.00	1.10	0.72	1.50	0.02	1.51	0.02	1.35	0.52	1.44	0.00	1.49	0.00	0.97	0.92
	Girl no boy	1.41	0.00	1.39	0.00	1.24	0.38	1.46	0.04	1.42	0.08	1.48	0.41	1.39	0.01	1.38	0.01	1.15	0.63
	Boys/Girls (both)	1.45	0.00	1.55	0.00	0.91	0.70	1.51	0.01	1.63	0.01	1.03	0.96	1.43	0.00	1.52	0.00	0.86	0.57
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.25	0.01	1.22	0.03	1.23	0.27	1.27	0.08	1.21	0.23	1.59	0.19	1.23	0.05	1.22	0.09	1.07	0.75
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.86	0.70	0.81	0.55	1.41	0.61	2.29	0.61	0.89	0.89	4.90	0.19	0.74	0.40	0.77	0.49	0.79	0.69
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.14	0.32	1.17	0.25	0.86	0.56	0.84	0.51	0.91	0.73	0.56	0.24	1.22	0.18	1.24	0.17	0.97	0.93
	25-29 years	1.19	0.19	1.26	0.09	0.73	0.22	1.01	0.96	1.08	0.78	0.65	0.37	1.22	0.20	1.32	0.08	0.70	0.23
	30-34 years	1.07	0.63	1.19	0.23	0.52	0.03	1.06	0.83	1.30	0.34	0.34	0.06	1.02	0.93	1.12	0.49	0.58	0.09
	35-39 years	1.05	0.70	1.10	0.53	0.73	0.27	0.98	0.96	0.99	0.97	0.74	0.59	1.02	0.89	1.11	0.54	0.63	0.15
	40-44 years	1.13	0.39	1.17	0.32	0.82	0.48	0.96	0.88	0.95	0.87	0.83	0.75	1.17	0.37	1.25	0.23	0.72	0.30
	45-49 years	1.18	0.30	1.21	0.23	0.84	0.61	1.08	0.80	1.14	0.65	0.66	0.56	1.15	0.45	1.20	0.35	0.83	0.58

continue…

Table 10.1.2 (…continued): Determinants of Women Autonomy in Family Planning (more children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.03	0.71	1.09	0.33	0.73	0.14	1.09	0.52	1.07	0.62	1.08	0.79	0.99	0.93	1.10	0.43	0.50	0.02
	8-years education	1.42	0.00	1.60	0.00	0.79	0.46	1.85	0.00	2.05	0.00	1.04	0.92	1.01	0.97	1.12	0.50	0.42	0.09
	10-12yrs education	1.39	0.00	1.66	0.00	0.56	0.10	1.46	0.01	1.71	0.00	0.60	0.29	1.27	0.12	1.46	0.06	0.54	0.21
	Higher education	1.78	0.00	2.19	0.00	0.96	0.92	1.76	0.00	2.02	0.00	0.90	0.84	1.82	0.01	2.37	0.01	1.40	0.70
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.26	0.01	1.22	0.01	1.21	0.25	1.11	0.48	1.09	0.55	1.11	0.73	1.27	0.01	1.23	0.03	1.23	0.32
	8-years education	1.23	0.02	1.29	0.01	0.83	0.35	0.97	0.83	0.96	0.79	0.98	0.95	1.34	0.00	1.45	0.00	0.75	0.25
	10-12years education	1.34	0.00	1.49	0.00	0.68	0.04	1.16	0.32	1.23	0.21	0.81	0.52	1.39	0.00	1.59	0.00	0.57	0.01
	Higher education	1.27	0.01	1.45	0.00	0.62	0.08	1.18	0.30	1.31	0.13	0.81	0.59	1.20	0.14	1.39	0.02	0.46	0.03
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.08	0.18	1.08	0.23	1.08	0.58	0.85	0.09	0.90	0.32	0.73	0.14	1.20	0.01	1.15	0.08	1.42	0.05
	High income	0.90	0.40	0.97	0.89	0.32	0.05	0.81	0.25	0.96	0.89	0.30	0.05	0.74	0.19	0.76	0.34	0.76	0.00
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.09	0.24	1.12	0.15	0.90	0.51	1.36	0.05	1.33	0.06	1.11	0.75	1.02	0.83	1.06	0.51	0.81	0.30
	High income	1.28	0.00	1.43	0.00	0.68	0.02	1.54	0.00	1.69	0.00	0.83	0.58	1.19	0.05	1.32	0.01	0.61	0.01
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.08	0.44	1.04	0.73	1.24	0.25	0.90	0.50	0.87	0.42	1.05	0.86	1.16	0.24	1.10	0.49	1.36	0.19
	NWFP	1.76	0.00	2.23	0.00	0.55	0.00	2.16	0.00	3.64	0.00	0.50	0.05	1.72	0.00	2.13	0.00	0.59	0.03
	Baluchistan	0.08	0.00	0.07	0.00	3.21	0.00	0.15	0.00	0.09	0.00	8.67	0.00	0.07	0.00	0.07	0.00	1.16	0.79

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; LR chi2 (29) = 2566.49; Prob > chi2 = 0.00; Log likelihood = -9387.20; Pseudo R2 = 0.1203. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 638.51 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop No. obs. = 13348; Design df = 1101; F (58, 1044) = 7.21; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(29, 499)=5.22, P > F = 0.00. Pseudo R2 = 0.1203. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 638.51 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(58, 470) = 5.06; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(29, 546) =6.19, P>F=0.00. Pseudo R2 = 0.1203. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 638.51 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (58, 517) = 277.88; Prob > F = 0.00*

Table 10.1.3: Determinants of Women Autonomy in Family Planning (more children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.04	1.36	0.01	0.75	0.23	1.20	0.25	1.26	0.16	0.92	0.84	1.26	0.10	1.41	0.04	0.66	0.14
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.89	0.15	0.93	0.36	0.79	0.19	0.83	0.19	0.84	0.25	0.82	0.52	0.91	0.32	0.96	0.68	0.75	0.21
	Above Average	0.82	0.01	0.89	0.10	0.62	0.01	0.73	0.00	0.76	0.02	0.65	0.10	0.85	0.08	0.94	0.52	0.56	0.01
Household Size: No. of children	No Child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boys no Girl	1.47	0.00	1.50	0.00	1.11	0.68	1.52	0.01	1.53	0.02	1.36	0.52	1.46	0.00	1.50	0.00	0.99	0.96
	Girls no boy	1.42	0.00	1.40	0.00	1.26	0.36	1.47	0.04	1.43	0.07	1.49	0.41	1.40	0.00	1.38	0.01	1.17	0.60
	Boys = Girls	1.35	0.00	1.45	0.00	0.79	0.40	1.43	0.05	1.53	0.03	0.99	0.99	1.32	0.02	1.42	0.01	0.70	0.25
	Girls > Boys	1.61	0.00	1.62	0.00	1.21	0.48	1.91	0.00	1.96	0.00	1.36	0.57	1.51	0.00	1.51	0.00	1.15	0.65
	Boys > Girls	1.50	0.00	1.65	0.00	0.81	0.44	1.37	0.06	1.55	0.02	0.79	0.66	1.56	0.00	1.69	0.00	0.84	0.55
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.21	0.03	1.19	0.07	1.17	0.40	1.24	0.11	1.18	0.29	1.58	0.19	1.19	0.12	1.19	0.05	1.00	1.00
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.86	0.69	0.81	0.54	1.40	0.61	2.11	0.63	0.83	0.83	4.33	0.23	0.74	0.40	0.77	0.48	0.81	0.72
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.14	0.32	1.17	0.25	0.86	0.56	0.84	0.51	0.91	0.72	0.56	0.25	1.22	0.18	1.24	0.16	0.97	0.92
	25-29 years	1.18	0.20	1.26	0.10	0.73	0.21	1.00	0.99	1.06	0.82	0.65	0.37	1.21	0.21	1.32	0.09	0.70	0.23
	30-34 years	1.05	0.70	1.18	0.25	0.51	0.02	1.05	0.86	1.28	0.37	0.34	0.06	1.00	0.99	1.11	0.52	0.57	0.08
	35-39 years	1.04	0.79	1.08	0.59	0.72	0.25	0.98	0.94	0.98	0.94	0.75	0.60	1.00	0.99	1.09	0.61	0.62	0.13
	40-44 years	1.11	0.50	1.14	0.39	0.79	0.41	0.93	0.81	0.93	0.81	0.82	0.73	1.13	0.47	1.22	0.28	0.68	0.24
	45-49 years	1.14	0.40	1.18	0.30	0.81	0.53	1.05	0.86	1.11	0.73	0.64	0.53	1.11	0.58	1.17	0.43	0.78	0.48

continue…

Table 10.1.3 (…continued): Determinants of Women Autonomy in Family Planning (more children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.66	1.10	0.31	0.73	0.14	1.10	0.48	1.08	0.58	1.09	0.78	1.00	0.98	1.11	0.41	0.51	0.02
	8-years education	1.42	0.00	1.60	0.00	0.79	0.47	1.86	0.00	2.07	0.00	1.03	0.95	1.00	1.00	1.12	0.51	0.41	0.09
	10-12years education	1.40	0.00	1.67	0.00	0.56	0.10	1.46	0.01	1.71	0.00	0.59	0.27	1.28	0.10	1.47	0.05	0.55	0.22
	Higher education	1.79	0.00	2.20	0.00	0.96	0.92	1.77	0.00	2.02	0.00	0.89	0.83	1.83	0.01	2.38	0.01	1.38	0.71
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.26	0.01	1.22	0.01	1.21	0.26	1.11	0.47	1.09	0.54	1.10	0.75	1.28	0.01	1.23	0.03	1.23	0.32
	8-years education	1.23	0.02	1.29	0.01	0.83	0.34	0.96	0.81	0.95	0.77	0.97	0.93	1.34	0.01	1.45	0.00	0.75	0.24
	10-12years education	1.34	0.00	1.49	0.00	0.68	0.04	1.16	0.32	1.23	0.21	0.81	0.50	1.39	0.00	1.59	0.00	0.57	0.01
	Higher education	1.27	0.01	1.45	0.00	0.62	0.08	1.18	0.30	1.31	0.13	0.80	0.57	1.20	0.14	1.39	0.02	0.46	0.03
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.07	0.21	1.08	0.25	1.07	0.64	0.85	0.08	0.90	0.29	0.73	0.13	1.19	0.01	1.15	0.08	1.40	0.06
	High income	0.89	0.36	0.97	0.86	0.31	0.04	0.80	0.24	0.96	0.87	0.30	0.05	0.74	0.19	0.77	0.35	0.74	0.00
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.10	0.21	1.12	0.13	0.91	0.55	1.37	0.04	1.34	0.06	1.13	0.70	1.03	0.77	1.06	0.48	0.82	0.33
	High income	1.29	0.00	1.43	0.00	0.69	0.03	1.56	0.00	1.71	0.00	0.85	0.62	1.19	0.05	1.33	0.01	0.62	0.02
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.08	0.43	1.04	0.72	1.24	0.25	0.89	0.45	0.87	0.41	1.04	0.90	1.16	0.24	1.09	0.50	1.36	0.19
	NWFP	1.76	0.00	2.23	0.00	0.55	0.00	2.13	0.00	3.61	0.00	0.49	0.04	1.72	0.00	2.13	0.00	0.59	0.03
	Baluchistan	0.08	0.00	0.07	0.00	3.27	0.00	0.15	0.00	0.09	0.00	8.60	0.00	0.07	0.00	0.07	0.00	1.19	0.76

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (31) = 2572.32; Prob > chi2 = 0.00; Log likelihood = -9385.03; Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (62, 1040) = 6.81; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(31, 497) = 5.00, P > F = 0.00. Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 5.11; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 6.04, P>F=0.00. Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (62, 513) = 264.51; Prob > F = 0.00.*

Table 10.1.4: Determinants of Women Autonomy in Family Planning (more children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.04	1.36	0.01	0.75	0.23	1.20	0.25	1.26	0.16	0.92	0.84	1.26	0.10	1.41	0.04	0.66	0.14
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.89	0.15	0.93	0.36	0.79	0.19	0.83	0.19	0.84	0.25	0.82	0.52	0.91	0.32	0.96	0.68	0.75	0.21
	Above Average	0.82	0.01	0.89	0.10	0.62	0.01	0.73	0.00	0.76	0.02	0.65	0.10	0.85	0.08	0.94	0.52	0.56	0.01
Household Size: No. of Children	Boys = Girls	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.74	0.00	0.69	0.00	1.27	0.40	0.70	0.05	0.66	0.03	1.01	0.99	0.76	0.02	0.70	0.01	1.43	0.25
	Boys no girl	1.09	0.30	1.03	0.74	1.41	0.11	1.06	0.68	1.00	0.99	1.37	0.39	1.11	0.34	1.05	0.66	1.41	0.18
	Girls no boy	1.06	0.56	0.96	0.66	1.60	0.04	1.03	0.87	0.94	0.70	1.50	0.32	1.07	0.58	0.97	0.80	1.67	0.06
	Girls > Boys	1.20	0.02	1.12	0.20	1.54	0.02	1.34	0.04	1.29	0.10	1.37	0.32	1.15	0.14	1.06	0.55	1.64	0.03
	Boys > Girls	1.11	0.17	1.13	0.15	1.03	0.89	0.96	0.74	1.01	0.93	0.80	0.46	1.19	0.07	1.19	0.10	1.20	0.45
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.21	0.03	1.19	0.07	1.17	0.40	1.24	0.11	1.18	0.29	1.58	0.19	1.19	0.12	1.19	0.05	1.00	1.00
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.86	0.69	0.81	0.54	1.40	0.61	2.11	0.63	0.83	0.83	4.33	0.23	0.74	0.40	0.77	0.48	0.81	0.72
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.14	0.32	1.17	0.25	0.86	0.56	0.84	0.51	0.91	0.72	0.56	0.25	1.22	0.18	1.24	0.16	0.97	0.92
	25-29 years	1.18	0.20	1.26	0.10	0.73	0.21	1.00	0.99	1.06	0.82	0.65	0.37	1.21	0.21	1.32	0.09	0.70	0.23
	30-34 years	1.05	0.70	1.18	0.25	0.51	0.02	1.05	0.86	1.28	0.37	0.34	0.06	1.00	0.99	1.11	0.52	0.57	0.08
	35-39 years	1.04	0.79	1.08	0.59	0.72	0.25	0.98	0.94	0.98	0.94	0.75	0.60	1.00	0.99	1.09	0.61	0.62	0.13
	40-44 years	1.11	0.50	1.14	0.39	0.79	0.41	0.93	0.81	0.93	0.81	0.82	0.73	1.13	0.47	1.22	0.28	0.68	0.24
	45-49 years	1.14	0.40	1.18	0.30	0.81	0.53	1.05	0.86	1.11	0.73	0.64	0.53	1.11	0.58	1.17	0.43	0.78	0.48

continue…

Table 10.1.4 (…continued): Determinants of Women Autonomy in Family Planning (more children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit		Multinomial Logit				Ordered Logit		Multinomial Logit				Ordered Logit		Multinomial Logit			
				Partial to no autonomy		Strong to partial autonomy				Partial to no autonomy		Strong to partial autonomy				Partial to no autonomy		Strong to partial autonomy	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.66	1.10	0.31	0.73	0.14	1.10	0.48	1.08	0.58	1.09	0.78	1.00	0.98	1.11	0.41	0.51	0.02
	8-years education	1.42	0.00	1.60	0.00	0.79	0.47	1.86	0.00	2.07	0.00	1.03	0.95	1.00	1.00	1.12	0.51	0.41	0.09
	10-12years education	1.40	0.00	1.67	0.00	0.56	0.10	1.46	0.01	1.71	0.00	0.59	0.27	1.28	0.10	1.47	0.05	0.55	0.22
	Higher education	1.79	0.00	2.20	0.00	0.96	0.92	1.77	0.00	2.02	0.00	0.89	0.83	1.83	0.01	2.38	0.01	1.38	0.71
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.26	0.01	1.22	0.01	1.21	0.26	1.11	0.47	1.09	0.54	1.10	0.75	1.28	0.01	1.23	0.03	1.23	0.32
	8-years education	1.23	0.02	1.29	0.01	0.83	0.34	0.96	0.81	0.95	0.77	0.97	0.93	1.34	0.01	1.45	0.00	0.75	0.24
	10-12years education	1.34	0.00	1.49	0.00	0.68	0.04	1.16	0.32	1.23	0.21	0.81	0.50	1.39	0.00	1.59	0.00	0.57	0.01
	Higher education	1.27	0.01	1.45	0.00	0.62	0.08	1.18	0.30	1.31	0.13	0.80	0.57	1.20	0.14	1.39	0.02	0.46	0.03
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.07	0.21	1.08	0.25	1.07	0.64	0.85	0.08	0.90	0.29	0.73	0.13	1.19	0.01	1.15	0.08	1.40	0.06
	High income	0.89	0.36	0.97	0.86	0.31	0.04	0.80	0.24	0.96	0.87	0.30	0.05	0.74	0.19	0.77	0.35	0.74	0.00
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.10	0.21	1.12	0.13	0.91	0.55	1.37	0.04	1.34	0.06	1.13	0.70	1.03	0.77	1.06	0.48	0.82	0.33
	High income	1.29	0.00	1.43	0.00	0.69	0.03	1.56	0.00	1.71	0.00	0.85	0.62	1.19	0.05	1.33	0.01	0.62	0.02
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.08	0.43	1.04	0.72	1.24	0.25	0.89	0.45	0.87	0.41	1.04	0.90	1.16	0.24	1.09	0.50	1.36	0.19
	NWFP	1.76	0.00	2.23	0.00	0.55	0.00	2.13	0.00	3.61	0.00	0.49	0.04	1.72	0.00	2.13	0.00	0.59	0.03
	Baluchistan	0.08	0.00	0.07	0.00	3.27	0.00	0.15	0.00	0.09	0.00	8.60	0.00	0.07	0.00	0.07	0.00	1.19	0.76

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348;LR chi2 (31) = 2572.32; Prob > chi2 = 0.00; Log likelihood = -9385.03; Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (62, 1040) = 6.81; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(31, 497)=5.00, P > F = 0.00. Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 5.11; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 6.04, P>F=0.00. Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (62, 513) = 264.51; Prob > F = 0.00*

Table 10.1.5: Determinants of Women Autonomy in Family Planning (more children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.24	0.04	1.36	0.01	0.75	0.23	1.20	0.25	1.26	0.16	0.92	0.84	1.26	0.10	1.41	0.04	0.66	0.14
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.89	0.15	0.93	0.36	0.79	0.19	0.83	0.19	0.84	0.25	0.82	0.52	0.91	0.32	0.96	0.68	0.75	0.21
	Above Average	0.82	0.01	0.89	0.10	0.62	0.01	0.73	0.00	0.76	0.02	0.65	0.10	0.85	0.08	0.94	0.52	0.56	0.01
Household Size: No. of Children	Girls > Boys	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.62	0.00	0.62	0.00	0.83	0.48	0.52	0.00	0.51	0.00	0.74	0.57	0.66	0.00	0.66	0.00	0.87	0.65
	Boys no girl	0.91	0.32	0.92	0.43	0.92	0.65	0.79	0.15	0.78	0.18	1.00	1.00	0.96	0.75	0.99	0.92	0.86	0.54
	Girls no boy	0.88	0.20	0.86	0.15	1.04	0.86	0.77	0.12	0.73	0.09	1.10	0.82	0.93	0.54	0.91	0.48	1.02	0.95
	Boys = Girls	0.84	0.02	0.90	0.20	0.65	0.02	0.75	0.04	0.78	0.10	0.73	0.32	0.87	0.14	0.94	0.55	0.61	0.03
	Boys > girls	0.93	0.28	1.01	0.86	0.67	0.01	0.72	0.00	0.79	0.06	0.58	0.04	1.03	0.69	1.12	0.26	0.73	0.09
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.21	0.03	1.19	0.07	1.17	0.40	1.24	0.11	1.18	0.29	1.58	0.19	1.19	0.12	1.19	0.05	1.00	1.00
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	0.86	0.69	0.81	0.54	1.40	0.61	2.11	0.63	0.83	0.83	4.33	0.23	0.74	0.40	0.77	0.48	0.81	0.72
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.14	0.32	1.17	0.25	0.86	0.56	0.84	0.51	0.91	0.72	0.56	0.25	1.22	0.18	1.24	0.16	0.97	0.92
	25-29 years	1.18	0.20	1.26	0.10	0.73	0.21	1.00	0.99	1.06	0.82	0.65	0.37	1.21	0.21	1.32	0.09	0.70	0.23
	30-34 years	1.05	0.70	1.18	0.25	0.51	0.02	1.05	0.86	1.28	0.37	0.34	0.06	1.00	0.99	1.11	0.52	0.57	0.08
	35-39 years	1.04	0.79	1.08	0.59	0.72	0.25	0.98	0.94	0.98	0.94	0.75	0.60	1.00	0.99	1.09	0.61	0.62	0.13
	40-44 years	1.11	0.50	1.14	0.39	0.79	0.41	0.93	0.81	0.93	0.81	0.82	0.73	1.13	0.47	1.22	0.28	0.68	0.24
	45-49 years	1.14	0.40	1.18	0.30	0.81	0.53	1.05	0.86	1.11	0.73	0.64	0.53	1.11	0.58	1.17	0.43	0.78	0.48

continue…

Table 10.1.5 (…continued): Determinants of Women Autonomy in Family Planning (more children) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.04	0.66	1.10	0.31	0.73	0.14	1.10	0.48	1.08	0.58	1.09	0.78	1.00	0.98	1.11	0.41	0.51	0.02
	8-years education	1.42	0.00	1.60	0.00	0.79	0.47	1.86	0.00	2.07	0.00	1.03	0.95	1.00	1.00	1.12	0.51	0.41	0.09
	10-12years education	1.40	0.00	1.67	0.00	0.56	0.10	1.46	0.01	1.71	0.00	0.59	0.27	1.28	0.10	1.47	0.05	0.55	0.22
	Higher education	1.79	0.00	2.20	0.00	0.96	0.92	1.77	0.00	2.02	0.00	0.89	0.83	1.83	0.01	2.38	0.01	1.38	0.71
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.26	0.01	1.22	0.01	1.21	0.26	1.11	0.47	1.09	0.54	1.10	0.75	1.28	0.01	1.23	0.03	1.23	0.32
	8-years education	1.23	0.02	1.29	0.01	0.83	0.34	0.96	0.81	0.95	0.77	0.97	0.93	1.34	0.01	1.45	0.00	0.75	0.24
	10-12years education	1.34	0.00	1.49	0.00	0.68	0.04	1.16	0.32	1.23	0.21	0.81	0.50	1.39	0.00	1.59	0.00	0.57	0.01
	Higher education	1.27	0.01	1.45	0.00	0.62	0.08	1.18	0.30	1.31	0.13	0.80	0.57	1.20	0.14	1.39	0.02	0.46	0.03
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.07	0.21	1.08	0.25	1.07	0.64	0.85	0.08	0.90	0.29	0.73	0.13	1.19	0.01	1.15	0.08	1.40	0.06
	High income	0.89	0.36	0.97	0.86	0.31	0.04	0.80	0.24	0.96	0.87	0.30	0.05	0.74	0.19	0.77	0.35	0.74	0.00
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.10	0.21	1.12	0.13	0.91	0.55	1.37	0.04	1.34	0.06	1.13	0.70	1.03	0.77	1.06	0.48	0.82	0.33
	High income	1.29	0.00	1.43	0.00	0.69	0.03	1.56	0.00	1.71	0.00	0.85	0.62	1.19	0.05	1.33	0.01	0.62	0.02
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.08	0.43	1.04	0.72	1.24	0.25	0.89	0.45	0.87	0.41	1.04	0.90	1.16	0.24	1.09	0.50	1.36	0.19
	NWFP	1.76	0.00	2.23	0.00	0.55	0.00	2.13	0.00	3.61	0.00	0.49	0.04	1.72	0.00	2.13	0.00	0.59	0.03
	Baluchistan	0.08	0.00	0.07	0.00	3.27	0.00	0.15	0.00	0.09	0.00	8.60	0.00	0.07	0.00	0.07	0.00	1.19	0.76

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (31) = 2572.32; Prob > chi2 = 0.00; Log likelihood = -9385.03; Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (62, 1040) = 6.81; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(31, 497)=5.00, P > F = 0.00. Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 5.11; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 6.04, P>F=0.00. Pseudo R2 = 0.1205. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 645.30 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (62, 513) = 264.51; Prob > F = 0.00*

Table 10.2.2: Determinants of Women Autonomy in Family Planning (use of contraceptives) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.30	0.02	1.44	0.01	0.82	0.34	1.13	0.47	1.22	0.28	0.85	0.66	1.35	0.04	1.51	0.01	0.78	0.33
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.08	0.88	0.15	0.85	0.36	0.79	0.09	0.78	0.10	0.81	0.49	0.88	0.21	0.91	0.35	0.85	0.47
	Above Average	0.87	0.06	0.97	0.67	0.60	0.00	0.78	0.04	0.85	0.22	0.60	0.05	0.88	0.19	0.96	0.97	0.57	0.01
Household Size: No. of children	No child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boy no girl	1.60	0.00	1.70	0.00	0.95	0.83	1.70	0.01	1.86	0.00	1.00	1.00	1.56	0.00	1.64	0.00	0.94	0.80
	Girl no boy	1.53	0.00	1.54	0.00	1.12	0.64	1.51	0.03	1.52	0.03	1.18	0.72	1.56	0.00	1.56	0.00	1.10	0.74
	Boys/Girls (both)	1.74	0.00	1.96	0.00	0.82	0.36	1.90	0.00	2.21	0.00	0.90	0.80	1.69	0.00	1.86	0.00	0.79	0.33
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.21	0.02	1.19	0.05	1.14	0.47	1.10	0.48	1.08	0.64	1.24	0.48	1.25	0.03	1.24	0.05	1.06	0.81
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.10	0.78	1.06	0.86	1.33	0.66	4.62	0.29	1.96	0.58	3.80	0.27	0.84	0.59	0.90	0.77	0.81	0.70
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.22	0.11	1.17	0.21	1.18	0.54	0.94	0.83	0.90	0.68	0.92	0.88	1.31	0.05	1.29	0.09	1.22	0.50
	25-29 years	1.30	0.03	1.26	0.08	1.16	0.57	1.20	0.48	1.16	0.59	0.93	0.86	1.32	0.05	1.31	0.08	1.19	0.58
	30-34 years	1.08	0.57	1.10	0.48	0.83	0.52	1.16	0.58	1.28	0.38	0.56	0.27	1.03	0.86	1.05	0.77	0.92	0.81
	35-39 years	1.24	0.13	1.26	0.13	0.94	0.83	1.30	0.38	1.28	0.46	0.93	0.89	1.19	0.28	1.26	0.18	0.84	0.59
	40-44 years	1.13	0.41	1.11	0.54	1.04	0.89	1.05	0.89	1.00	1.00	0.89	0.83	1.16	0.40	1.16	0.43	1.03	0.93
	45-49 years	1.08	0.60	1.04	0.83	1.11	0.76	1.04	0.90	0.94	0.84	1.02	0.98	1.09	0.64	1.09	0.64	0.98	0.96

continue…

Table 10.2.2 (…continued): Determinants of Women Autonomy in Family Planning (use of contraceptives) Decision-making

Determinants		***Panel-I: Overall***						***Panel-II: Urban Region***						***Panel-III: Rural Region***					
		Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***				Ordered Logit[1]		***Multinomial Logit***			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.09	0.34	1.19	0.10	0.72	0.11	1.09	0.58	1.07	0.63	1.05	0.85	1.08	0.48	1.25	0.10	0.51	0.01
	8-years education	1.32	0.01	1.52	0.00	0.73	0.30	1.36	0.07	1.52	0.03	0.86	0.68	1.17	0.28	1.36	0.10	0.51	0.15
	10-12years education	1.37	0.01	1.65	0.00	0.65	0.09	1.22	0.21	1.42	0.06	0.65	0.21	1.56	0.01	1.94	0.00	0.72	0.42
	Higher education	1.67	0.00	2.30	0.00	0.74	0.49	1.50	0.03	1.91	0.00	0.68	0.47	1.93	0.00	2.94	0.00	1.11	0.90
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.17	0.05	1.16	0.07	1.08	0.64	1.03	0.83	1.08	0.64	0.90	0.72	1.17	0.09	1.15	0.15	1.14	0.49
	8-years education	1.12	0.21	1.19	0.08	0.76	0.15	0.96	0.79	0.97	0.88	0.89	0.72	1.16	0.16	1.28	0.04	0.66	0.08
	10-12yrs education	1.20	0.04	1.32	0.01	0.73	0.06	1.12	0.44	1.21	0.26	0.79	0.42	1.18	0.10	1.33	0.02	0.66	0.05
	Higher education	1.20	0.07	1.47	0.00	0.56	0.03	1.21	0.26	1.49	0.04	0.64	0.23	1.07	0.61	1.29	0.10	0.46	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.05	1.11	0.11	1.13	0.37	0.90	0.27	0.93	0.52	0.81	0.31	1.24	0.00	1.19	0.04	1.40	0.05
	High income	1.21	0.18	1.36	0.16	0.98	0.95	1.20	0.31	1.69	0.07	0.82	0.68	0.88	0.63	0.84	0.61	0.83	0.81
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.06	0.52	1.06	0.49	0.98	0.91	1.25	0.19	1.12	0.51	1.55	0.14	1.01	0.92	1.05	0.60	0.82	0.32
	High income	1.20	0.01	1.33	0.00	0.74	0.06	1.41	0.01	1.47	0.01	1.11	0.72	1.14	0.13	1.29	0.02	0.62	0.02
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.18	0.12	1.11	0.38	1.35	0.11	0.85	0.31	0.78	0.16	1.22	0.46	1.43	0.02	1.34	0.07	1.39	0.19
	NWFP	1.56	0.00	2.03	0.00	0.50	0.00	1.71	0.00	3.06	0.00	0.41	0.01	1.59	0.00	2.02	0.00	0.52	0.01
	Baluchistan	0.08	0.00	0.07	0.00	2.64	0.00	0.13	0.00	0.08	0.00	7.26	0.00	0.07	0.00	0.07	0.00	1.08	0.86

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (29) = 2743.15; Prob > chi2 = 0.0000; Log likelihood = -9056.789; Pseudo R2 = 0.1315. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 582.74 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (58, 1044) = 6.48; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(29, 499)=4.90, P > F = 0.00. Pseudo R2 = 0.1315. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 582.74 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(58, 470) = 4.37; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(29, 546) =5.52, P>F=0.00. Pseudo R2 = 0.1315. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (29) = 582.74 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (58, 517) = 4.69; Prob > F = 0.00*

Table 10.2.3: Determinants of Women Autonomy in Family Planning (use of contraceptives) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[1]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.30	0.02	1.44	0.01	0.81	0.33	1.12	0.48	1.22	0.28	0.84	0.66	1.35	0.03	1.51	0.01	0.78	0.32
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.09	0.88	0.16	0.86	0.38	0.78	0.09	0.78	0.10	0.80	0.46	0.89	0.23	0.91	0.37	0.86	0.49
	Above Average	0.88	0.07	0.97	0.70	0.61	0.00	0.79	0.04	0.85	0.22	0.61	0.05	0.89	0.21	0.92	0.99	0.58	0.01
Household Size: No. of children	No Child	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Boys no Girl	1.60	0.00	1.71	0.00	0.96	0.86	1.70	0.01	1.86	0.00	1.02	0.97	1.57	0.00	1.65	0.00	0.94	0.82
	Girls no boy	1.54	0.00	1.54	0.00	1.13	0.61	1.51	0.03	1.52	0.03	1.19	0.70	1.56	0.00	1.56	0.00	1.10	0.72
	Boys = Girls	1.68	0.00	1.92	0.00	0.75	0.24	1.86	0.00	2.20	0.00	0.81	0.66	1.62	0.00	1.81	0.00	0.74	0.24
	Girls > Boys	1.83	0.00	1.96	0.00	0.98	0.94	2.11	0.00	2.26	0.00	1.18	0.72	1.74	0.00	1.87	0.00	0.91	0.71
	Boys > Girls	1.76	0.00	2.01	0.00	0.77	0.29	1.81	0.00	2.16	0.00	0.81	0.65	1.74	0.00	1.94	0.00	0.77	0.33
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.19	0.04	1.19	0.07	1.10	0.60	1.09	0.53	1.08	0.64	1.19	0.56	1.23	0.05	1.23	0.07	1.03	0.91
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.10	0.78	1.06	0.86	1.32	0.66	4.46	0.29	1.95	0.58	3.39	0.31	0.84	0.59	0.90	0.77	0.81	0.71
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.22	0.11	1.17	0.21	1.18	0.54	0.94	0.83	0.90	0.68	0.93	0.89	1.31	0.05	1.29	0.08	1.22	0.50
	25-29 years	1.30	0.04	1.26	0.08	1.15	0.58	1.20	0.49	1.16	0.59	0.92	0.85	1.32	0.05	1.31	0.08	1.18	0.59
	30-34 years	1.07	0.60	1.10	0.49	0.82	0.50	1.15	0.59	1.28	0.38	0.55	0.25	1.02	0.89	1.04	0.79	0.91	0.79
	35-39 years	1.23	0.14	1.25	0.14	0.93	0.80	1.30	0.39	1.28	0.46	0.92	0.87	1.18	0.30	1.25	0.20	0.83	0.58
	40-44 years	1.12	0.46	1.10	0.57	1.01	0.96	1.04	0.91	1.00	1.00	0.85	0.77	1.14	0.45	1.15	0.46	1.01	0.98
	45-49 years	1.07	0.66	1.03	0.87	1.08	0.83	1.03	0.93	0.94	0.84	0.98	0.97	1.07	0.71	1.08	0.68	0.96	0.91

continued…

Table 10.2.3 (…continued): Determinants of Women Autonomy in Family Planning (use of contraceptives) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.09	0.33	1.19	0.10	0.73	0.11	1.09	0.57	1.07	0.63	1.06	0.83	1.08	0.47	1.25	0.10	0.51	0.01
	8-years education	1.32	0.01	1.52	0.00	0.73	0.30	1.36	0.07	1.52	0.03	0.86	0.68	1.17	0.29	1.36	0.10	0.50	0.15
	10-12years education	1.37	0.01	1.65	0.00	0.65	0.09	1.22	0.21	1.42	0.06	0.64	0.20	1.56	0.01	1.94	0.00	0.72	0.43
	Higher education	1.67	0.00	2.31	0.00	0.74	0.49	1.50	0.03	1.91	0.00	0.68	0.47	1.93	0.00	2.94	0.00	1.11	0.90
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.17	0.05	1.16	0.07	1.08	0.64	1.03	0.83	1.08	0.64	0.89	0.70	1.17	0.09	1.15	0.15	1.14	0.50
	8-years education	1.12	0.21	1.19	0.08	0.76	0.15	0.96	0.78	0.97	0.88	0.89	0.70	1.16	0.16	1.28	0.04	0.66	0.08
	10-12years education	1.20	0.04	1.32	0.01	0.73	0.06	1.12	0.44	1.21	0.27	0.79	0.41	1.18	0.10	1.33	0.02	0.66	0.05
	Higher education	1.20	0.07	1.47	0.00	0.56	0.03	1.21	0.26	1.49	0.04	0.64	0.22	1.07	0.61	1.29	0.10	0.46	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.06	1.11	0.11	1.12	0.40	0.90	0.25	0.93	0.52	0.80	0.28	1.24	0.00	1.19	0.04	1.39	0.05
	High income	1.20	0.19	1.35	0.17	0.96	0.92	1.20	0.31	1.69	0.07	0.81	0.67	0.88	0.63	0.84	0.61	0.81	0.79
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.06	0.50	1.06	0.49	0.99	0.95	1.25	0.18	1.12	0.50	1.58	0.12	1.01	0.90	1.06	0.58	0.83	0.33
	High income	1.21	0.01	1.33	0.00	0.75	0.07	1.42	0.01	1.47	0.01	1.13	0.67	1.15	0.13	1.29	0.02	0.62	0.02
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.18	0.12	1.11	0.38	1.35	0.11	0.85	0.29	0.78	0.16	1.21	0.48	1.43	0.02	1.34	0.07	1.39	0.18
	NWFP	1.56	0.00	2.03	0.00	0.50	0.00	1.70	0.00	3.05	0.00	0.40	0.01	1.59	0.00	2.02	0.00	0.53	0.01
	Baluchistan	0.08	0.00	0.07	0.00	2.67	0.00	0.13	0.00	0.08	0.00	7.23	0.00	0.07	0.00	0.07	0.00	1.09	0.84

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (31) = 2744.08; Prob > chi2 = 0.0000; Log likelihood = -9056.32; Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (62, 1040) = 6.13; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(31, 497) = 4.59, P > F = 0.00. Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 4.41; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 5.22, P>F=0.00. Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (62, 513) = 4.58; Prob > F = 0.00.*

Table 10.2.4: Determinants of Women Autonomy in Family Planning (use of contraceptives) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.30	0.02	1.44	0.01	0.81	0.33	1.12	0.48	1.22	0.28	0.84	0.66	1.35	0.03	1.51	0.01	0.78	0.32
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.09	0.88	0.16	0.86	0.38	0.78	0.09	0.78	0.10	0.80	0.46	0.89	0.23	0.91	0.37	0.86	0.49
	Above Average	0.88	0.07	0.97	0.70	0.61	0.00	0.79	0.04	0.85	0.22	0.61	0.05	0.89	0.21	0.92	0.99	0.58	0.01
Household Size: No. of Children	Boys = Girls	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.60	0.00	0.52	0.00	1.34	0.24	0.54	0.00	0.45	0.00	1.24	0.66	0.62	0.00	0.55	0.00	1.36	0.24
	Boys no girl	0.95	0.59	0.89	0.24	1.28	0.20	0.91	0.53	0.84	0.30	1.26	0.53	0.97	0.76	0.91	0.43	1.28	0.26
	Girls no boy	0.92	0.34	0.80	0.02	1.51	0.05	0.81	0.21	0.69	0.03	1.48	0.31	0.96	0.73	0.86	0.19	1.50	0.08
	Girls > Boys	1.09	0.32	1.02	0.81	1.31	0.11	1.13	0.40	1.03	0.88	1.46	0.21	1.07	0.48	1.03	0.78	1.23	0.29
	Boys > Girls	1.05	0.56	1.05	0.58	1.03	0.85	0.97	0.83	0.98	0.90	1.01	0.99	1.07	0.48	1.07	0.53	1.05	0.81
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.19	0.04	1.19	0.07	1.10	0.60	1.09	0.53	1.08	0.64	1.19	0.56	1.23	0.05	1.23	0.07	1.03	0.91
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.10	0.78	1.06	0.86	1.32	0.66	4.46	0.29	1.95	0.58	3.39	0.31	0.84	0.59	0.90	0.77	0.81	0.71
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.22	0.11	1.17	0.21	1.18	0.54	0.94	0.83	0.90	0.68	0.93	0.89	1.31	0.05	1.29	0.08	1.22	0.50
	25-29 years	1.30	0.04	1.26	0.08	1.15	0.58	1.20	0.49	1.16	0.59	0.92	0.85	1.32	0.05	1.31	0.08	1.18	0.59
	30-34 years	1.07	0.60	1.10	0.49	0.82	0.50	1.15	0.59	1.28	0.38	0.55	0.25	1.02	0.89	1.04	0.79	0.91	0.79
	35-39 years	1.23	0.14	1.25	0.14	0.93	0.80	1.30	0.39	1.28	0.46	0.92	0.87	1.18	0.30	1.25	0.20	0.83	0.58
	40-44 years	1.12	0.46	1.10	0.57	1.01	0.96	1.04	0.91	1.00	1.00	0.85	0.77	1.14	0.45	1.15	0.46	1.01	0.98
	45-49 years	1.07	0.66	1.03	0.87	1.08	0.83	1.03	0.93	0.94	0.84	0.98	0.97	1.07	0.71	1.08	0.68	0.96	0.91

continued…

Table 10.2.4 (…continued): Determinants of Women Autonomy in Family Planning (use of contraceptives) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.09	0.33	1.19	0.10	0.73	0.11	1.09	0.57	1.07	0.63	1.06	0.83	1.08	0.47	1.25	0.10	0.51	0.01
	8-years education	1.32	0.01	1.52	0.00	0.73	0.30	1.36	0.07	1.52	0.03	0.86	0.68	1.17	0.29	1.36	0.10	0.50	0.15
	10-12years education	1.37	0.01	1.65	0.00	0.65	0.09	1.22	0.21	1.42	0.06	0.64	0.20	1.56	0.01	1.94	0.00	0.72	0.43
	Higher education	1.67	0.00	2.31	0.00	0.74	0.49	1.50	0.03	1.91	0.00	0.68	0.47	1.93	0.00	2.94	0.00	1.11	0.90
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.17	0.05	1.16	0.07	1.08	0.64	1.03	0.83	1.08	0.64	0.89	0.70	1.17	0.09	1.15	0.15	1.14	0.50
	8-years education	1.12	0.21	1.19	0.08	0.76	0.15	0.96	0.78	0.97	0.88	0.89	0.70	1.16	0.16	1.28	0.04	0.66	0.08
	10-12years education	1.20	0.04	1.32	0.01	0.73	0.06	1.12	0.44	1.21	0.27	0.79	0.41	1.18	0.10	1.33	0.02	0.66	0.05
	Higher education	1.20	0.07	1.47	0.00	0.56	0.03	1.21	0.26	1.49	0.04	0.64	0.22	1.07	0.61	1.29	0.10	0.46	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.06	1.11	0.11	1.12	0.40	0.90	0.25	0.93	0.52	0.80	0.28	1.24	0.00	1.19	0.04	1.39	0.05
	High income	1.20	0.19	1.35	0.17	0.96	0.92	1.20	0.31	1.69	0.07	0.81	0.67	0.88	0.63	0.84	0.61	0.81	0.79
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.06	0.50	1.06	0.49	0.99	0.95	1.25	0.18	1.12	0.50	1.58	0.12	1.01	0.90	1.06	0.58	0.83	0.33
	High income	1.21	0.01	1.33	0.00	0.75	0.07	1.42	0.01	1.47	0.01	1.13	0.67	1.15	0.13	1.29	0.02	0.62	0.02
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.18	0.12	1.11	0.38	1.35	0.11	0.85	0.29	0.78	0.16	1.21	0.48	1.43	0.02	1.34	0.07	1.39	0.18
	NWFP	1.56	0.00	2.03	0.00	0.50	0.00	1.70	0.00	3.05	0.00	0.40	0.01	1.59	0.00	2.02	0.00	0.53	0.01
	Baluchistan	0.08	0.00	0.07	0.00	2.67	0.00	0.13	0.00	0.08	0.00	7.23	0.00	0.07	0.00	0.07	0.00	1.09	0.84

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (31) = 2744.08; Prob > chi2 = 0.00; Log likelihood = -9056.32; Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (62, 1040) = 6.13; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(31, 497)=4.59, P > F = 0.00. Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 4.41; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 5.22, P>F=0.00. Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (62, 513) = 4.58; Prob > F = 0.00*

Table 10.2.5: Determinants of Women Autonomy in Family Planning (use of contraceptives) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Employment Status	Unemployed	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Employed	1.30	0.02	1.44	0.01	0.81	0.33	1.12	0.48	1.22	0.28	0.84	0.66	1.35	0.03	1.51	0.01	0.78	0.32
Household Size: Excluding Children	Below Average	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Average	0.87	0.09	0.88	0.16	0.86	0.38	0.78	0.09	0.78	0.10	0.80	0.46	0.89	0.23	0.91	0.37	0.86	0.49
	Above Average	0.88	0.07	0.97	0.70	0.61	0.00	0.79	0.04	0.85	0.22	0.61	0.05	0.89	0.21	0.92	0.99	0.58	0.01
Household Size: No. of Children	Girls > Boys	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	No Child	0.55	0.00	0.51	0.00	1.02	0.94	0.47	0.00	0.44	0.00	0.85	0.72	0.57	0.00	0.53	0.00	1.10	0.71
	Boys no girl	0.88	0.18	0.87	0.19	0.98	0.90	0.81	0.21	0.82	0.32	0.86	0.63	0.90	0.38	0.88	0.31	1.04	0.87
	Girls no boy	0.84	0.09	0.79	0.03	1.15	0.48	0.72	0.06	0.67	0.04	1.01	0.98	0.90	0.38	0.83	0.17	1.22	0.38
	Boys = Girls	0.92	0.32	0.98	0.81	0.76	0.11	0.88	0.40	0.97	0.88	0.68	0.21	0.93	0.48	0.97	0.78	0.81	0.29
	Boys > girls	0.96	0.59	1.03	0.75	0.79	0.11	0.86	0.22	0.96	0.76	0.69	0.13	1.00	0.96	1.04	0.71	0.85	0.40
Family Formation	Nuclear	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Extended	1.19	0.04	1.19	0.07	1.10	0.60	1.09	0.53	1.08	0.64	1.19	0.56	1.23	0.05	1.23	0.07	1.03	0.91
Mother-in-Law	Not Present	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Present	1.10	0.78	1.06	0.86	1.32	0.66	4.46	0.29	1.95	0.58	3.39	0.31	0.84	0.59	0.90	0.77	0.81	0.71
Age Structure	15-19 years	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	20-24 years	1.22	0.11	1.17	0.21	1.18	0.54	0.94	0.83	0.90	0.68	0.93	0.89	1.31	0.05	1.29	0.08	1.22	0.50
	25-29 years	1.30	0.04	1.26	0.08	1.15	0.58	1.20	0.49	1.16	0.59	0.92	0.85	1.32	0.05	1.31	0.08	1.18	0.59
	30-34 years	1.07	0.60	1.10	0.49	0.82	0.50	1.15	0.59	1.28	0.38	0.55	0.25	1.02	0.89	1.04	0.79	0.91	0.79
	35-39 years	1.23	0.14	1.25	0.14	0.93	0.80	1.30	0.39	1.28	0.46	0.92	0.87	1.18	0.30	1.25	0.20	0.83	0.58
	40-44 years	1.12	0.46	1.10	0.57	1.01	0.96	1.04	0.91	1.00	1.00	0.85	0.77	1.14	0.45	1.15	0.46	1.01	0.98
	45-49 years	1.07	0.66	1.03	0.87	1.08	0.83	1.03	0.93	0.94	0.84	0.98	0.97	1.07	0.71	1.08	0.68	0.96	0.91

continued…

Table 10.2.5 (…continued): Determinants of Women Autonomy in Family Planning (use of contraceptives) Decision-making

Determinants		Panel-I: Overall						Panel-II: Urban Region						Panel-III: Rural Region					
		Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit				Ordered Logit[1]		Multinomial Logit			
				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]				Partial to no autonomy[2]		Strong to partial autonomy[2]	
		Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t	Odds Ratio	P>t
Woman's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.09	0.33	1.19	0.10	0.73	0.11	1.09	0.57	1.07	0.63	1.06	0.83	1.08	0.47	1.25	0.10	0.51	0.01
	8-years education	1.32	0.01	1.52	0.00	0.73	0.30	1.36	0.07	1.52	0.03	0.86	0.68	1.17	0.29	1.36	0.10	0.50	0.15
	10-12years education	1.37	0.01	1.65	0.00	0.65	0.09	1.22	0.21	1.42	0.06	0.64	0.20	1.56	0.01	1.94	0.00	0.72	0.43
	Higher education	1.67	0.00	2.31	0.00	0.74	0.49	1.50	0.03	1.91	0.00	0.68	0.47	1.93	0.00	2.94	0.00	1.11	0.90
Husband's Level of Education	No education	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	5-years education	1.17	0.05	1.16	0.07	1.08	0.64	1.03	0.83	1.08	0.64	0.89	0.70	1.17	0.09	1.15	0.15	1.14	0.50
	8-years education	1.12	0.21	1.19	0.08	0.76	0.15	0.96	0.78	0.97	0.88	0.89	0.70	1.16	0.16	1.28	0.04	0.66	0.08
	10-12years education	1.20	0.04	1.32	0.01	0.73	0.06	1.12	0.44	1.21	0.27	0.79	0.41	1.18	0.10	1.33	0.02	0.66	0.05
	Higher education	1.20	0.07	1.47	0.00	0.56	0.03	1.21	0.26	1.49	0.04	0.64	0.22	1.07	0.61	1.29	0.10	0.46	0.02
Husband's Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.12	0.06	1.11	0.11	1.12	0.40	0.90	0.25	0.93	0.52	0.80	0.28	1.24	0.00	1.19	0.04	1.39	0.05
	High income	1.20	0.19	1.35	0.17	0.96	0.92	1.20	0.31	1.69	0.07	0.81	0.67	0.88	0.63	0.84	0.61	0.81	0.79
Family Income Status	Low income	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Middle income	1.06	0.50	1.06	0.49	0.99	0.95	1.25	0.18	1.12	0.50	1.58	0.12	1.01	0.90	1.06	0.58	0.83	0.33
	High income	1.21	0.01	1.33	0.00	0.75	0.07	1.42	0.01	1.47	0.01	1.13	0.67	1.15	0.13	1.29	0.02	0.62	0.02
States/ Provinces	Punjab	**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**		**1.00**	
	Sindh	1.18	0.12	1.11	0.38	1.35	0.11	0.85	0.29	0.78	0.16	1.21	0.48	1.43	0.02	1.34	0.07	1.39	0.18
	NWFP	1.56	0.00	2.03	0.00	0.50	0.00	1.70	0.00	3.05	0.00	0.40	0.01	1.59	0.00	2.02	0.00	0.53	0.01
	Baluchistan	0.08	0.00	0.07	0.00	2.67	0.00	0.13	0.00	0.08	0.00	7.23	0.00	0.07	0.00	0.07	0.00	1.09	0.84

Notes:

Panel-I: this panel refers to the overall results, 1) *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; LR chi2 (31) = 2744.08; Prob > chi2 = 0.00; Log likelihood = -9056.32; Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.* ***2)*** *Number of strata = 8; Number of PSUs = 1109; sub-pop. No. obs. = 13348; Design df = 1101; F (62, 1040) = 6.13; Prob > F = 0.00.*

Panel-II: this panel refers to the results of Urban region, 1) *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df=527; F(31, 497)=4.59, P > F = 0.00. Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 531; Subpop. No. of obs = 5252; Design df = 527; F(62, 466) = 4.41; Prob > F = 0.00.*

Panel-III: this panel refers to rural region results, 1) *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574, F(31, 544) = 5.22, P>F=0.00. Pseudo R2 = 0.1316. Approximate likelihood-ratio test of proportionality of odds across response categories: chi2 (31) = 585.34 Prob > chi2 = 0.00.****2)*** *Number of strata = 4; Number of PSUs = 578; Subpop. No. of obs = 8096; Design df = 574; F (62, 513) = 4.58; Prob > F = 0.00.*